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Neoliberalism, Finance, and Income Inequality: An Examination of Affluent Capitalist Democracies

Allen Thomas Hyde, Ph.D.

University of Connecticut, 2016

ABSTRACT

In the aftermath of the Great Recession, the dominance of financial markets and their tendency towards crises have resulted in a small global elite capturing huge income increases while many working families have struggled with stagnating wages, job loss, and increasing poverty. At the same time, neoliberal policies, focusing on market deregulation and the decay of social safety nets, have been touted as the way forward despite their potential negative impacts on workers and the poor. In this dissertation, I examine the effects of neoliberalism and financialization on income inequality and distributional dynamics in affluent capitalist democracies in a variety of ways. Using an updated version of the Comparative Welfare States data set, I analyze 18 OECD nations from 1981 to 2011, a period where both neoliberalism and financialization have become the norm. First, I investigate the ways neoliberalism and financialization affect market-generated (pre-tax and pre-transfer) income inequality, redistribution, and state-mediated (post-tax and post-transfer) income inequality. Second, I focus on how these factors determine the top 1% share of total market-generated income because the 1% have experienced the largest financial gains over the last few decades. Third, I incorporate data from the Luxembourg Income Study (LIS) to examine the ways neoliberalism and finance

have affected the 90-50 income ratio (comparing the top decile to the median worker), the 50-10 income ratio (comparing the median worker to bottom decile), and the 90-10 income ratio (comparing the top and bottom income deciles). This dissertation contributes to theoretical debates on neoliberalism, financialization, and inequality and provides rigorous empirical testing of current theories. Because the current literature is primarily focused on the United States, this also contributes to the comparative literature on financialization and inequality by focusing more generally on advanced capitalist democracies.

“Neoliberalism, Finance, and Income Inequality:

An Examination of Affluent Capitalist Democracies”

Allen Thomas Hyde
B.A., University of Alabama at Birmingham, 2009
M.A., University of Connecticut, 2012

A Dissertation

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Philosophy

at the

University of Connecticut

2016

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2016

APPROVAL PAGE

Doctor of Philosophy Dissertation

"Neoliberalism, Finance, and Income Inequality:
An Examination of Affluent Capitalist Democracies"

Presented by

Allen Thomas Hyde, B.A., M.A.

Major Advisor _____

Michael Wallace

Associate Advisor _____

Mary J. Fischer

Associate Advisor _____

Jeremy Pais

University of Connecticut

2016

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CHAPTER 1: INTRODUCTION

1.1 Research Problem

In recent decades, rising income inequality and financial instability have become pervasive features of the political economy in affluent capitalist democracies as symbolized by such iconic events as the Great Recession, the Occupy Wall Street Movement, and the Greek debt crisis that had an impact across the European Union. I contend that three distinct yet interrelated processes— globalization, neoliberalism, and financialization—underlie the polarization of income and proclivity to crisis in capitalist accumulation during the neoliberal era, which runs from the early 1980s to the present (see Kotz 2008; Baud and Durand 2012; Azkunaga, San-Jose, and Urionabarrenetxea 2013; Keaney 2014). The link between economic globalization and income inequality is well-established in the literature (see Brady, Beckfield, and Zhao 2007 for a review, and Alderson and Nielsen 2002 for an exemplary study) so while I will incorporate variables to tap globalization processes, they are not the central focus of this dissertation. On the other hand, there has been less empirical research on the ways that neoliberalism and financialization impact income inequality in affluent capitalist countries. In this dissertation, I address this shortcoming by examining the instantaneous, short-run, and long-run effects of neoliberalism and three dimensions of financialization on a variety of measures of income inequality in 18 affluent capitalist nations from 1981 to 2011.

Neoliberalism is prominently featured in recent discussions about inequality (Harvey 2005, 2010; Wallerstein 2011). Neoliberal policies enacted by Margaret Thatcher in the United Kingdom and Ronald Reagan in the United States helped launch neoliberalism as the master frame for global economic policy (Harvey 2005). Neoliberalism is motivated by a powerful ideology that unfettered free markets are inherently more efficient in organizing the economy

(Fligstein 2001), and it serves as the key lens for understanding capitalist development in affluent democracies since 1980. Neoliberalism encompasses economic practices such as reducing taxes and shrinking the size of government, deregulation and privatization of economic sectors, and free trade: all of which are designed to release the dynamism of the private sector of the economy. Although neoliberalism has had a ubiquitous impact in economies throughout the world, it is difficult to measure and its impact on income inequality has not been rigorously examined.

Financialization refers to "the tendency for profit making in the economy to occur increasingly through financial channels rather than productive activities" (Krippner 2011:4). Recent scholarship explores financialization's role in rising income inequality (Moller and Rubin 2008; Zalewski and Whalen 2010; Assa 2012; Kus 2012; Arnum and Naples 2013). These studies point primarily to financialization's role in increasing wages for financial employees and limiting wage growth for nonfinancial workers (Lin and Tomaskovic-Devey 2013; Lapavitsas 2013), but other dimensions of financialization's impact have not been adequately examined. I explore the effects of three dimensions of financialization on income inequality: finance, insurance, and real estate (FIRE) employment; credit expansion; and financial crises.

This dissertation makes three major contributions to the literature on stratification in affluent nations. First, I examine how neoliberalism and financialization affect a variety of measures of income inequality. Many previous studies have primarily focused on either the pre-tax and pre-transfer or the post-tax and post-transfer Gini index of income inequality, a standard measure in the literature, alone. While both of these measures represent the overall inequality in a society, they do not speak to whether inequality is a) being driven by inequality in the labor market or by a weakened state capacity to reduce inequality through redistribution and b) how

neoliberalism and financialization impact incomes at different parts of the income distribution. Second, this dissertation provides a comprehensive examination of the determinants of income inequality by examining one measure of neoliberalism, the neoliberal state, and three distinct components of financialization—FIRE employment, credit expansion, and financial crises—that have not been examined in detail in previous research. Third, this dissertation uses social structures of accumulation (SSA) theory to provide an overarching theoretical framework to understand inequality in the neoliberal era. I adopt Kotz and McDonough's (2010:98) definition of the social structure of accumulation as being as "a coherent, long-lasting institutional structure that promotes profit-making and serves as a framework for capital accumulation." SSA theory is useful for this dissertation because it focuses on long swings of growth and decline in capital accumulation, and several scholars argue that the 1980s marks the beginning of a new SSA in which neoliberalism and finance dominate (Kotz and McDonough 2010; Tabb 2010; Flaherty 2010). These contributions provide insight into the mechanisms that connect neoliberalism and financialization to income inequality and will be elaborated throughout the rest of this dissertation.

1.2 Outline of Dissertation

This dissertation is organized into seven chapters. Chapter 1, the current chapter, provides an introduction to the research questions, concepts, and organization of the dissertation. In Chapter 2, I provide the theoretical framework for the dissertation. First, I describe social structures of accumulation (SSA) theory first developed by Gordon, Edwards, and Reich (1982) to provide the theoretical underpinning for why neoliberalism and financialization have contributed to capital accumulation and rising inequality during the neoliberal era. SSA theory is useful for this dissertation because its central focus on political economic institutions, policies,

and ideologies. Additionally, there are growing theoretical debates about neoliberalism, financialization, and inequality during the neoliberal era (Kotz and McDonough 2010). Second, I provide an in-depth discussion of the links between neoliberalism, financialization, and income inequality in affluent nations drawing upon literature and theory from social stratification and inequality, the sociology of finance, economics, and political science. Finally, I provide hypotheses for neoliberalism, the three components of financialization, and the six dependent variables used in this dissertation.

Chapter 3 outlines the data and methods used to answer the research questions in this dissertation. The primary source of data is the Comparative Welfare States Dataset (CWS) by Huber, Ragin, and Stephens (1997) and updated by David Brady and colleagues. Using publicly available macroeconomic and income inequality data, Michael Wallace, Todd Vachon, and myself updated and added to the CWS dataset to examine contemporary processes on inequality, globalization, labor, and other social processes. This dataset spans approximately 40 countries from the years 1950 to 2012; however, this dissertation examines only 18 most affluent OECD countries for the years of 1981 to 2011 to limit the analyses to a grouping of affluent nations that share similar characteristics during the neoliberal period. The focus on 18 affluent nations is consistent with much prior research and extending beyond these 18 nations could dilute the quality of the sample as it would include affluent nations with those of lesser levels of development. Further, data availability for the variables of interest are not accessible before 1980 or for the entire 40 countries in the dataset. These data are strongly balanced and include 540 observations.

Additionally, I improve upon the methodological approach of previous research on the effects of neoliberalism and financialization on income inequality by using error correction

models (ECMs) in the analyses of Chapters 4 and 5. ECMs are advantageous because they efficiently address common issues in the analysis of macroeconomic time series data, such as unit roots, autocorrelation, and panel heteroscedasticity (De Boefe and Keele 2008). Further, they allow for the coefficients of the independent variables to be decomposed into instantaneous, short-run, and long-run effects (De Boefe and Keele 2008). Instantaneous effects estimate the impact of x on Δy at year t (or the effect of x on y during the same year). Short-run effects estimate the impact of x at time $t\text{-}1$ on Δy at year t (or the effect of x on Δy one year later). Long-run effects are spread out over time using the short-run coefficients and the error correction rates, to estimate the extent that an outside shock disrupts the trend in y, to project long-run processes over time. Higher error correction rates will result in deeper and shorter impacts on y while lower error correction rates result in smaller and longer effects. Previous research has primarily using traditional time series methods allows for models to be specified for different lag lengths; however, they do not have the capability of assessing simultaneously instantaneous, short-run, and long-run effects. Chapters 4 and 5 overcome these limitations by using ECMs.

Chapter 6 uses data from the Luxembourg Income Study (LIS) to examine income inequality in different parts of the income distribution. The LIS data are appended to the primary CWS dataset used in Chapters 4 and 5. There are some important differences in the Chapter 6 data structure that require me to use a slightly different method. The LIS data requires that I use an unbalanced panel design, meaning that some nations have more observations than others, with 120 observations for 16 affluent nations. The smaller sample size means that I must be conservative in the amount of coefficients and estimates in my models because of degrees of freedom. Additionally, the variation in the number of observations by nation and the uneven gaps between observations cause the meaning of differences and lags in the dependent variables to

vary widely compared to the simple interpretation of a year-to-year change that is present in Chapters 4 and 5 due to its balanced design. As a result, I use fixed effects models using OLS and Driscoll-Kraay (Driscoll and Kraay 1998) adjusted standard errors to account for unobserved heterogeneity, autocorrelation, panel heteroscedasticity, and cross-sectional dependence. While these models to not adjust for unit roots, Fisher unit root tests lead to inconclusive results over whether or not they exist in the LIS data. More information about these analyses are provided in Chapters 3 and 6.

In Chapter 4, I investigate the impacts of these neoliberalism and financialization variables on three dimensions of income inequality: *market-generated (MG) inequality*, or inequality before taxes and transfers; *redistribution*, or the net result of state-led efforts to redistribute income from the rich to the poor through taxes and transfers; and *state-mediated (SM) inequality*, or inequality after taxes and transfers. This chapter contributes to the literature by addressing the following research question: *Do neoliberalism and financialization impact income inequality by creating more unequal market incomes (represented by MG inequality), by affecting redistribution, by creating more unequal incomes after taxes and transfers, or some combination of the three?*

Most previous cross-national studies of income inequality have focused exclusively on MG inequality because until recently these data were more widely available. Studies focusing on SM inequality alone are rare, but some studies have incorporated both MG and SM income measures (see Brady's 2003 study of MG and SM poverty). A few studies have examined the determinants of redistribution (e.g., Iversen and Soskice 2009; Dallinger 2013; Baird 2014; Bradley, Huber, Moller, Nielsen, and Stephens 2003), but none have examined the effects of financialization. In short, while a few studies have focused on one or two of these dimensions, no

previous study has examined all three. I assert that it is crucial to go beyond just examining MG inequality as the state plays a prominent role in either reducing or exacerbating inequality, depending upon past political-economic decisions and contemporary reactions to economic crises. Examining all three measures is advantageous because it provides insight into the mechanisms that link neoliberalism and financialization to income inequality. Further, the redistributive responses of affluent nations to changes in neoliberalism and financialization are understudied. For example, when a financial crises occurs, does the welfare state typically respond by cutting social services and transfers and reducing redistribution or do existing policies blunt some of the impact of crises on redistribution? Using a combination of these three measures allows me to answer these questions.

While Chapter 4 provides a general picture of how neoliberalism and financialization impact income inequality, Chapter 5 focuses on the top 1% share of income and examines one research question, *How do neoliberalism and financialization impact the top 1% share in affluent nations?* Until recently, top income shares have been relatively unexamined, but they are important in understanding the general dynamics of inequality for two major reasons. First, the top 1% share of income is one of the major factors driving rising inequality in affluent nations (Atkinson, Piketty, and Saez 2010). Additionally, the income sources and composition for the wealthy are distinct from other parts of the income distribution. Indeed, the richest top 1% often draws a greater portion of their income from rentier, entrepreneurial, and other financial sources (Alvaredo et al. 2016).

This chapter is important because there is evidence that those in the top 1%, despite their small size, act as strong and powerful actors with shared interests in shaping markets, social and redistributive policies, and other social institutions in their favor. For example, Kim et al.. (2015)

found that high pay among CEOs was facilitated through status competition, social networks, and peer group influence in their study of individual- and firm-level data in the United States. As noted by C. Wright Mills (1956) a half century ago, while there may be competition and intra-class divisions among the ultra-rich, they share powerful overarching class interests, particularly in regards to taxation, redistribution, and financial deregulation. These shared interests have likely only intensified in the neoliberal era. Illustratively, Volscho and Kelley (2012) examined the growth of top incomes in United States from 1949 to 2008 using data from the World Wealth and Income Database (WWID). In general, they found that rightward shifts in Congress, the decline of labor unions, lower tax rates on top incomes, increased trade openness and laissez-faire policies, and asset and stock price bubbles (aspects of financialization) all increased top incomes in the United States during the second half of the 20th and early 21st centuries. Also, in a study of 14 affluent nations from 1990 to 2010, Flaherty (2015) found that financialization increases the top 1% income shares by increasing the power of capital relative to labor in the market and in the creation of social policy. Chapter 5 builds upon these previous findings to explore how new components of financialization impact the top 1% share in 18 affluent nations from 1981 to 2011 to maximize generalizability among affluent nations during the whole of the neoliberal era.

To date, there has been very little research examining the impacts of neoliberalism and financialization on different parts of the income distribution. In Chapter 6, I fill this gap in the literature using data collected from the Luxembourg Income Study (LIS). The main research question is: *Is rising inequality caused by neoliberalism and financialization being driven by upper-tail or lower-tail inequality?* In particular, upper-tail inequality is measured as the 90-50 ratio, or the ratio between the 90th income percentile and the 50th income percentile, representing

inequality between the rich and the median worker in the income distribution. Lower-tail inequality is measured as the 50-10 ratio, or the ratio between the 50^{th} and the 10^{th} percentiles, representing inequality between the median worker and the poor. This distinction between upper- and lower-tail inequality is largely inspired by Neckerman and Torche (2007) who demonstrate that much of the increase in general income inequality is driven by changes in the upper tail. Further, upper-tail inequality has outpaced lower-tail inequality in recent decades. A third measure of inequality, the top-bottom inequality, or the income gap between the 90^{th} and 10^{th} income percentiles, will also be examined to represent inequality between the rich and the poor. The 90-10 ratio allows me to triangulate with findings for the 90-50 and 50-10 ratios to gain a better overall understanding of the relative extent to which the 50^{th} percentile, 10^{th} percentile are losing income shares. Chapter 6 is important because much of the empirical research and theoretical debates revolving around financialization and inequality either focus on a broad definition of inequality or the top 1% while paying less attention to the middle class and especially the poor. In this chapter, I overcome this shortcoming.

Finally, Chapter 7 returns to the original research questions and summarizes the key findings of each empirical chapter. I provide general conclusions from my dissertation research, discuss the implications of this research, and outline broader questions related to this topic that can guide future research in this area. Overall, I find that neoliberalism and financialization, two of the dominant systems of capitalist accumulation in the neoliberal SSA, have increased income inequality in affluent capitalist nations in a variety of ways. Some scholars have gone as far as saying that societies with high levels of neoliberalism and financialization have created two bifurcated economies within nations (Lapavitsas 2013). First, there is a financial economy that experiences high income growth yet produces little of value other than using capital to create

more capital. Second, there is a productive economy, which produces the goods and services that we use in everyday life, that has low income growth and sluggish profits. In other words, finance has decoupled itself from the rest of the economy. As a result, I discuss the implications of these processes on economic and social inequality in the neoliberal era.

CHAPTER 2: LINKING NEOLIBERALISM, FINANCIALIZATION, AND INCOME INEQUALITY

2.1 Social Structures of Accumulation, Neoliberalism, and Financialization

Over history, capitalism has gone through cycles of prosperity and crisis. After each crisis, a period of economic restructuring occurs to reboot the capital accumulation process. Social structures of accumulation (SSA) theory provides a useful framework to understand how major changes in the economy over the last few decades, specifically neoliberalism and financialization, have both contributed to efforts by capital to maximize capital accumulation and simultaneously led to rising economic inequality. Initially developed by Gordon, Edwards, and Reich (1982), SSA theory not only emphasizes shifts in the behaviors and norms among firms, labor, and capital; but it also places a central focus on the state's role in shaping taxation, social welfare policy, redistribution, the regulation of industries such as finance and real estate, technological systems, monetary and credit systems, and trade among other nations. This makes it a broad yet useful framework for understanding inequality in the neoliberal era, which runs from the early 1980s to the present, in comparison to other periods in the history of capitalism.

Gordon, Edwards, and Reich (1982) argued that capitalism goes through a series of long swings, each consisting of a period of sustained economic growth followed by a period of decline. Every long swing consists of three phases: exploration, consolidation, and decay (Gordon, Edwards, and Reich 1994). The exploration phase is when capitalists experiment with new ways to organize markets and systems of labor control in order to maximize accumulation. This is followed by a period of consolidation in which capitalists and firms create a more dominant and coherent social structure of accumulation within the economy based on the most successful practices from the exploration period. Consolidation typically coincides with

sustained economic growth and stability. Finally, each long swing ends with a period of decay where the current dominant SSA sees capital accumulation slow and eventually come to a halt because the old institutions that once produced prosperity become outmoded and are no longer suited for continued accumulation. The decay period typically ends with a series of crises that grow progressively worse. During the decay phase, capitalists simultaneously begin a new period of exploration as obstacles to capitalist expansion lead to experimental strategies and arrangements for renewed capitalist expansion, thus setting the stage for a new SSA to begin.

Before describing in detail the literature on the SSA that has dominated contemporary capitalism since around 1980, it is important to first describe prior SSAs for historical context. While this discussion primarily focuses on the United States, I will briefly discuss similarities and differences between other affluent nations whenever possible. In Figure 2.1, I present a typology of the three SSAs in the United States from 1790 to the 1970s adopted from Gordon, Edwards, and Reich's (1982) seminal book *Segmented Work, Divided Workers: the Historical Transformation of Labor in the United States* and Wallace and Brady (2010). The first SSA, initial proletarianization, began its exploration phase around 1790 and experienced decay from 1873 to the late 1890s. During this period, the fundamental transformation in the labor process was the movement from self-employed agrarian work and independent artisans into the ranks of wage labor—i.e., working for someone else. A simple system of control was established as capitalists sought to increase capital accumulation by bringing workers under more constant supervision in factories or shops. A variant of simple control was entrepreneurial control where a capitalist-entrepreneur, often a craftsman, supervised day-to-day operations directly.

Figure 2.1: **Historical Forces Shaping the Organization of Work in the United States: Long Swings, Social structures of Accumulation, and Dominant Control Systems.**

SOCIAL STRUCTURE OF ACCUMULATION	**INITIAL PROLETARIANIZATION**	**HOMOGENIZATION**	**SEGMENTATION**
Dominant control system	***Simple: entrepreneurial, hierarchical***	***Technical***	***Bureaucratic***
Approximate Timing:			
1790-1820			
1820-mid 1840s	**Exploration**		
mid 1840s-1873	**Consolidation**		
1873-late 1890s	**Decay**	**Exploration**	
late 1890s-WWI		**Consolidation**	
WWI-WWII		**Decay**	**Exploration**
WWII-early 1970s			**Consolidation**
Early 1970s-present			**Decay**

DEFINITIONS:

Long swings: Long periods of sustained economic growth (perhaps 25 years long) followed by long periods of sustained economic decline (perhaps 25 years long), usually connected to revolutionary, new modes of social and economic organization or "epoch-making inventions".

Social structures of accumulation: The specific institutional environment within which the accumulation of capitalist profits takes place; includes such things as core technological systems, the way markets are organized, the monetary and credit systems, the pattern of government involvement in the economy, and the character of class conflict over the accumulation process

Dominant control systems: This is the "contested terrain" of capitalist-worker relations: the dominant system of control used by capitalists to elicit compliance by workers to a prevailing system of production; a core component and a dynamic feature of the social structure of accumulation

***Adapted from: Gordon, Edwards, and Reich (1982) and Wallace and Brady (2010)**

The next SSA, homogenization, began its exploration phase during the 1873 to late 1980s period and experienced its decay between World War I and II (Gordon, Edwards, and Reich 1982; Wallace and Brady 2010). During this period, workers moved from smaller workplaces under the supervision of capitalists to larger factories with mechanized labor. Capitalists created a system known as technical control, which used machinery to create a common rhythm among workers in large companies where direct supervision was no longer practical. The assembly line became popular during this period, and the division of labor increased as workers were often assigned small, unskilled tasks. Ultimately, the Great Depression created both an economic crisis and a crisis in the system of control as workers began to organize and unionize. The labor movement grew rapidly and reached peak numbers coming out of the Depression and into World War II as unions and capitalists reached a tense but cooperative coexistence in order to promote the war effort at home and abroad.

The primary SSA long swing associated with post-World War II boom in the United States is segmentation (Gordon, Edwards, and Reich 1982; Wallace and Brady 2010). There are several key features of the segmentation SSA. The size and strength of unions during the capital-labor accord that occurred in the economic expansion during the 1950s and 1960s, paired with strike activity, allowed wages to be strong and labor to be organized (Bowles and Gintis 1982). As a result, the middle class grew and income inequality decreased in the United States. Capitalists developed a system of bureaucratic control in response to these changes in power dynamics, which sought out to divide workers into different groups by industrial, occupational, race, gender, and class lines in order to break class consciousness and solidarity among workers associated with labor after World War II. During this time, labor became increasingly segmented into two sectors: the primary sector and secondary sector. Primary sector jobs tended to be in

larger, more profitable firms, were more likely to be unionized, and tended to be held by white men. Secondary sector jobs, on the other hand, tended to be low-skill and low-paying and tended to be held by women and racial and ethnic minorities.

There are several other important aspects of the segmentation SSA that are worth noting. In the 1950s and 1960s, United States economic policy was firmly established in Keynesian principles of demand stimulus, which suggests that the government should spend and invest in goods, infrastructure, and services in order to stimulate a lack of demand in the private market (Reich 1994). This means that government policies were more concerned with galvanizing economic growth through spending and reducing unemployment and less concerned with the growth of public debt and inflation. These types of policies became cemented in the United States during the New Deal and carried over to varying degrees into the post-World War II period of the 1950s and 1960s. Additionally, the United States United States emerged from its isolationist agenda to take a much more influential international role. During this time, the United States' economic, political, and military agenda would shift against the rise of communism, the Soviet Union, and the Cold War. The goal was to ship the American brand of capitalism throughout the globe.

The 1970s were a tumultuous time for many affluent nations, particularly the United States, and represent the decline of the segmentation SSA. In 1973, surges in oil prices created a series of crises by increasing the cost of manufacturing and transportation while shifting income and profits from the United States and other affluent nations to oil-producing nations in the Middle East and other regions (Tomaskovic-Devy and Lin 2011). Additionally, the power of unions from the post-war period led to struggles with corporate leadership over the distribution of income and wages in the United States and United Kingdom (Wolfson and Kotz 2010).

Segmentation helped divide workers; however, capitalists still had trouble accumulating capital. Combined, these processes caused stagflation, which is a period when economic growth is stagnant and inflation increases. With unstable financial markets, faltering profits, and what were seen as bloated incomes for workers, capitalists were left with a quandary: how do they regain power in a period of economic stagnation?

Similar trends in both growth and relations between capital and labor occurred in other affluent nations from the 1950s to the late 1970s; however, scholars argue that there were two major types of affluent capitalist nations by the end of the period: coordinated market and liberal market economies (Hall and Soskice 2001). Coordinated market economies (CMEs), like Germany, Norway, Finland, and Sweden had comprehensive welfare states, strong labor movements, and corporate practices that focus on long-run relationships and planning. Liberal market economies (LMEs), like the United States, United Kingdom, Australia, Canada, and New Zealand had relatively weaker labor movements, weaker welfare states, and corporate practices that focus on short-term relationships and planning. Starting in the 1980s, CMEs and LMEs would become increasingly different as LMEs more fully embraced neoliberalism and financialization in the neoliberal era, as I will discuss later in this chapter.

This summary of the postwar SSA in affluent nations brings us to the neoliberal era, which started in the early 1980s and runs until the present. There is evidence that the relationship between labor and capital, as well as the methods of capital accumulation, during the neoliberal era represent a distinct break from previous periods (Kotz 2003). Starting in the late 1970s and early 1980s, there was increased power of corporations and capital, a retrenchment of the welfare state, the deregulation of many industries, and increased global trade and interdependency, particularly in the United States and United Kingdom (Wolfson and Kotz 2010). In the United

States, there was also a massive anti-union movement that would crush much of the power of labor relative to capital. While income inequality decreased in the United States after World War II due to union strength and income growth for the middle class, these trends would reverse in the late 1970s and early 1980s in a process known as the Great U-Turn (Bluestone and Harrison 1982; Harrison and Bluestone 1988). Inequality began to increase in many affluent other capitalist democracies in the late 1970s and 1980s as well (Aldersen and Nielsen 2002).

There are three competing, but somewhat complimentary, theoretical strands within the SSA literature that define accumulation during the neoliberal era: spatialization, neoliberalism, and financialization. First, spatialization (Brady and Wallace 2000; Wallace and Brady 2010) focuses on the spatial restructuring of the labor process. This means that various parts of the labor process, such as different aspects of labor and management, no longer had to be located in the same physical space as is epitomized with the auto industry in Detroit during the post-World War II era. Instead, cars and other commodities could be manufactured all over the world, wherever labor was cheapest. Assembly of cars could take place Alabama or other states with lower labor costs and less unions while management could be located in Detroit. Changes in trade, communication, and technology led to a new system of social control, technocratic control that allowed management to move production sites to locations with favorable labor costs while maintaining control over production from afar. In the 1980s, there was a shift in the manufacturing of many goods from core, affluent nations to lower-income, periphery nations where there are lower labor costs. In the era of spatialization, capital disciplines labor in affluent nations through the relocation, or the threat of relocation, of production. New international trade agreements allowed corporations to move their production sites and to avoid costly tariffs for imports. Although Brady and Wallace (2000) only examined foreign direct investment and

outsourcing as characteristics of spatialization, the movement of production to other countries is not the only way that capital can relocate production. Production can also be shifted from urban centers to rural areas within a nation given that wages and unionization are often lower and there tends to be less regulation in rural areas. All in all, the growth of globalization and spatialization has led to negative effects for the wages and working conditions of many workers in affluent nations.

While spatialization is often discussed as being distinct from globalization in the SSA literature, spatialization is often discussed as a part of globalization in the literature examining the relationship between economic globalization and income inequality (Alderson and Nielsen 2002; Brady, Beckfield, and Zhao 2007). In this literature, scholars tend to use two measures associated with globalization, imports and inward FDI, which I control for in this dissertation. There has been much less empirical research on the impacts of neoliberalism and financialization in the literature therefore they are the focus of this dissertation. Neoliberalism serves as the political ideology and policy framework that allowed capital to regain power relative to labor by reducing taxes, cutting or privatizing state social programs, deregulating markets, attacking unions, and increasing international trade agreements (Kotz and McDonough 2010). Of particular interest in this dissertation is the neoliberal reform of the state, which has a vital role of shaping market incomes and processes of redistribution within affluent nations.

The SSA literature on financialization, on the other hand, examines the development of the financial sector as a powerful political and economic actor in affluent nations (Tabb 2010). Deregulation of finance and the growth of the shareholder conception of the firm played vital roles in the development of financialization in the United States and other affluent nations (Krippner 2011; Tomaskovic-Devey and Lin 2011; Lapavitsas 2013). Additionally, scholars

have increasingly linked financialization to rising income and wealth inequality (Moller and Rubin 2008; Zalewski and Whalen 2010; Assa 2012; Kus 2012; Arnum and Naples 2013). In particular, the shifts from commercial to investment banking and from loans to securities have primarily benefitted the bank accounts of the wealthy (Guttman and Plihon 2008). Despite this growing body of literature, there is still room for improvement. Below, I expand upon how neoliberalism and financialization have contributed to capital accumulation and income inequality during the neoliberal era.

2.2 Neoliberalism, the State, and Income Inequality

Coming out of the economic crises related to oil shocks and stagflation in the United States and other nations during the 1970s, the global economic and political elites were left with a conundrum: how do they reshape the global economy to escape stagflation and the strength of organized labor to reinstitute another period of economic prosperity and capital dominance? One of the most resounding and influential answers to this problem in many nations was neoliberalism (Harvey 2005). In their reinterpretation of classical economics, early proponents of neoliberalism like Milton Friedman and Friedrich Hayek argued that market deregulation and economic freedom were the best policies for generating economic growth and creating optimal outcomes for all economic actors (see Jones 2012). For neoliberals, the state's role is to establish and maintain market sovereignty with minimal state intervention. This is accomplished by strengthening property rights, deregulating markets, promoting free trade, and reducing taxes and government spending (Harvey 2005). By enacting these reforms, private enterprise is released from government restriction, which according to neoliberal ideology, leads to a maximization of growth and prosperity.

While the ideas of Hayek and Friedman did not catch on immediately, they would become the cornerstone of economic policy under the administrations of Prime Minister Margaret Thatcher in the United Kingdom from 1979 to 1990 and President Ronald Reagan in the United States from 1981 to 1989. Both argued that neoliberal policies were the answer to sluggish economies and what they saw as a bloated government and strong labor movement. In affluent nations, neoliberalism tends to revolve around three major policy agendas: liberalization, privatization, and stabilization (Kotz and McDonough 2010). The first is liberalization, which focuses on the deregulation of markets from state intervention and trade agendas that promote the movement of goods and capital (but not people) across national borders. Second, privatization focuses on taking public goods and services out of the control of the government and putting them under the auspices of the free market. For neoliberals, the free market is always more efficient at providing goods and services than the government. Finally, stabilization, refers to monetary policies that focus solely on limiting inflation and balancing budgets rather than focusing on lowering unemployment or stimulating economic growth. During the 1980s, the Thatcher and Reagan administrations pushed these three policy agendas, which were a major shift from the post-war era. Increasingly, neoliberalism has become the dominant ideology of the global economy; however, nations enact neoliberal policies to varying degrees and prioritize different components (Hall 2001).

There is debate among scholars whether neoliberalism reduces interventionism of the state or whether it actually redirects state intervention to benefit capitalists and the wealthy (Wolfson and Kotz 2010). It is clear that there are class contradictions in the neoliberal SSA, however. In particular, most varieties of neoliberalism result in a reduction of state programs that benefit the working class, such as unemployment insurance and state pensions, while

implementing tax breaks and business studies that benefit the wealthy (Kotz and McDonough 2010). Most notably, there has been increased activism by the state to weaken labor unions in affluent nations. Perhaps the most evident examples of this are American President Ronald Reagan's breaking of the Professional Air Traffic Control Organization (PATCO) strike in 1981 by quickly firing nearly 13,000 government workers and British Prime Minister Margaret Thatcher's defeat of the Miners Union in 1984 and 1985. After these events, it was clear that both corporations and the state were actively trying to reduce the power of unions during the 1980s. Ultimately this led to wage concessions, union busting strategies by employers, and a dramatic weakening of labor during the 1980s.

While there are numerous varieties of neoliberalism with different components, this dissertation specifically focuses on the impacts of neoliberalism on the state because changes in the tax structure, government spending, and social programs can have large impacts on the distribution of market incomes and redistribution by the welfare state. Like Kotz and McDonough (2010), I identify several ways that neoliberalism shapes the role of the state in market economies. First, state spending and investment is dramatically reduced in an effort to minimize inflation. In the previous SSA, most economic policy was directed towards reducing unemployment and stimulating economic growth through spending and investment. Government spending helped to stimulate underutilized demand in the economy, which was not tapped into by capitalists. Investments in science and the arts, which may not be a priority for private firms, helps provide jobs, innovation, and spurs additional economic growth and tend to benefit the general public over private interests (Wright and Rogers 2015). As a result, unemployment rates in affluent nations like France, Italy, the United Kingdom, and the United States in period between 1950 and 1973 were relatively low, varying between 1.8 percent in the United Kingdom and 6.1 percent in Italy

on average over the period (OECD 2008). Under neoliberalism, the state's primary goal is to attain balanced budgets and minimize inflation while there is less concern for unemployment and stimulating economic growth (Kotz and McDonough 2010). As a result, unemployment rates were higher on average in the current SSA between 1980 and 2000, varying between a low of 6.4 percent in the United States to 10 percent in France and 10.7 percent in Italy (OECD 2008).

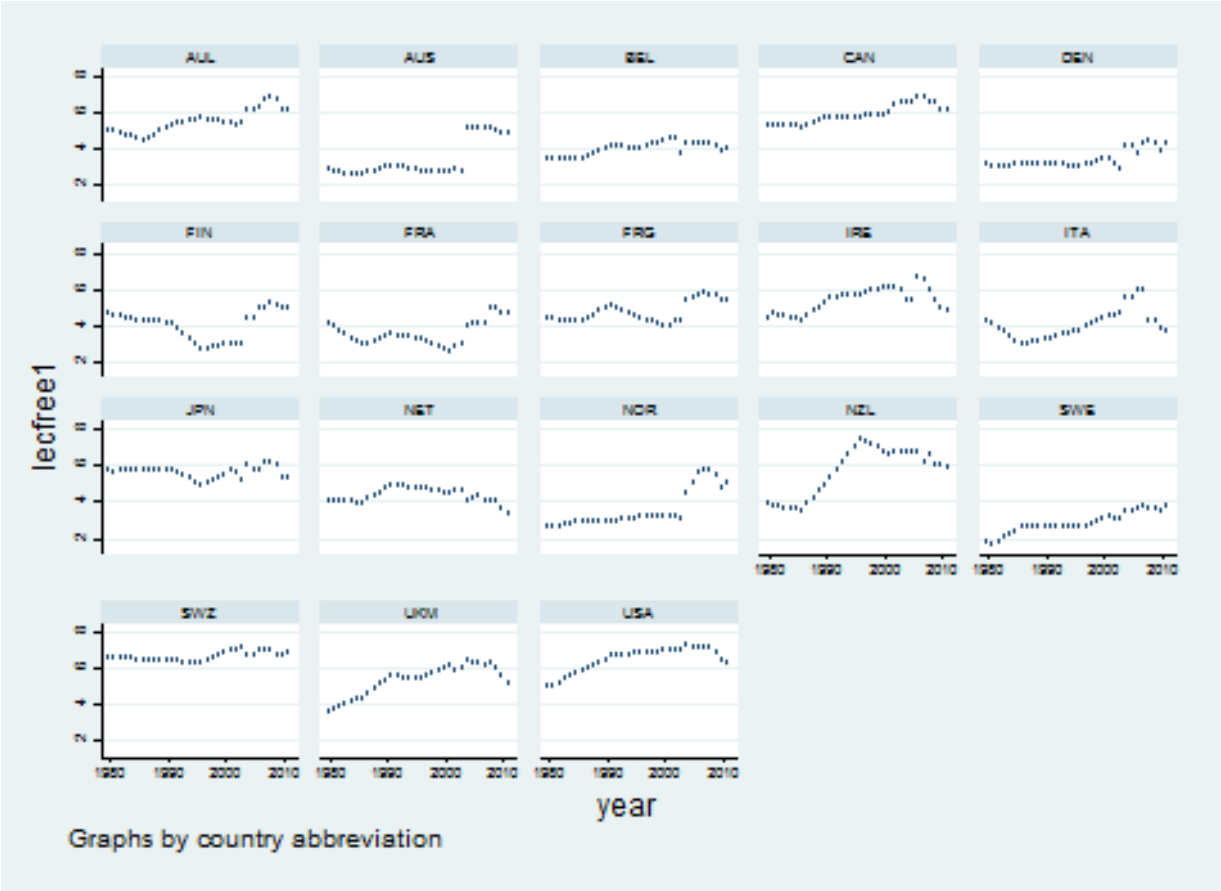
Second, there has been a reduction in state programs that help the middle class and the poor under neoliberalism as many states sought to balance their budgets and reduce government spending (Harvey 2005). In neoliberal states, there has been a sharp reduction in social wage programs that subsidize the incomes of the working and middle classes, such as unemployment insurance, retirement pensions, disability insurance, and educational subsidies. Additionally, there has been a shift in the provision of services and public goods provided by public agencies and organizations (Kotz and McDonough 2010; Wright and Rogers 2015). While the government still provides basic public goods like transportation, infrastructure, education, and criminal justice systems, private corporations and entities are playing increasing roles in shaping the content and provision of these services. Overwhelmingly, the poor and middle class utilize these goods and services to supplement their incomes and improve their quality of life. As a result, the retrenchment of these programs increases inequality.

Third, there has been a change in the tax structure used to fund government programs in affluent nations. Increasingly, the rich have seen their taxes decline while the tax burden has been shifted to the middle and working classes (Kotz and McDonough 2010). In many nations, the tax revenue lost to tax cuts for the rich has resulted in budget deficits and fiscal crises, which puts pressure on states to further reduce social programs and services. As a result, the rich have seen

their incomes after taxes and transfers increase in nations where neoliberalism is the norm. This particular component of the neoliberal state will be discussed in greater detail in Chapter 5.

The measure of neoliberalism used in this dissertation is the neoliberal state index, which provides insight into how much impact neoliberalism has had on state policies and size. The neoliberal state index, collected by Gwartney, Lawson, and Hall (2013), is comprised of several components discussed in the previous discussion of neoliberalism: government consumption spending, government transfers and subsidies, government investment, and the top marginal tax rate. This index ranges between 0 and 8 with greater values representing a more neoliberal state. In Figure 2.2, I present trends in the neoliberal state index for 18 affluent nations from 1981 to 2011. Overall, there is a trend toward developing the state into a neoliberal project in affluent nations, despite variation in this process. Liberal market economies, like the United States, United Kingdom, Australia, and Canada, have experienced a steady movement toward a more neoliberal state throughout the neoliberal era. Coordinated market economies in Scandinavia, like Sweden, Denmark, Finland, and Norway, had relatively low levels of neoliberalism in the 1980s and ended the period with low to moderate levels of neoliberalism despite some slight increases. Other nations, like Ireland, Italy, and New Zealand, saw neoliberalism increase from 1980 to the mid-1990s and early-2000s; however, neoliberalism declined in afterwards. Nations like France and Germany saw fluctuation throughout the neoliberal era; however, there was a general trend toward a more neoliberal state. Finally, Netherlands had a general decline in the neoliberal state. Occasionally, there are some nations that experience sharp increases in the neoliberal agenda scale, which represent major changes in policy. On the whole, there is certainly a general movement toward a more neoliberal state, however.

Figure 2.2: Trends in the Neoliberal State Index by Nation, 1981 to 2011.



Despite extensive theorizing on the subject, few rigorous empirical accounts of the effects of neoliberalism on inequality exist. In an analysis of 80 countries from 1970 to 2005, Bergh and Nilsson (2008) found that movement toward economic freedom increased inequality, especially in high-income nations. From the empirical literature, it is unclear how neoliberalism will impact the incomes of the middle class and poor. However, one can conclude from the theoretical discussion above that a movement toward a more neoliberal state will result in a reduction in social spending, top marginal tax rates, and social programs. These policy change would reduce redistribution, increase incomes for the top rich after taxes, and likely decrease incomes for the middle class and poor after taxes and transfers.

Below, I present the hypotheses for the neoliberal state's relationships with the measures of income inequality for each chapter. The first hypothesis is *Hypothesis 4.1* because it is associated with Chapter 4 and the first key independent variable, the neoliberal state. To remind the reader, market generated (MG) inequality represents income inequality before taxes and transfers are accounted. Redistribution represents reduction in income inequality by taxes and transfers. State-mediated (SM) inequality is income inequality after taxes and transfers. *Hypothesis 5.1* is from Chapter 5 and focuses the neoliberal state's predicted impact the top 1% share of income, which represents the income shares of the wealthy. Finally, *Hypothesis 6.1* is for Chapter 6 and is associated with the predicted relationships between the neoliberal state and upper- and lower-tail inequality, measured as the 90-50 and 50-10 income ratios respectively, and top-bottom inequality, measured as the 90-10 income ratios. Given the theoretical discussion above, I predict that:

Hypothesis 4.1: The neoliberal state will increase MG income inequality, decrease redistribution, and increase SM income inequality.

Hypothesis 5.1: The neoliberal state will increase the top 1% share.

Hypothesis 6.1: The neoliberal state will increase the upper-tail inequality, lower-tail inequality, and top-bottom inequality.

2.3 Financialization and Income Inequality

Financialization Defined

Financialization is a process of economic restructuring in which large, institutional financial actors (e.g., commercial or investment banks, insurance companies, and investment companies) assume an increasingly prominent role in the economy (Krippner 2011). Over the last several decades, the role of the financial sector has risen dramatically throughout the global

economy (Epstein 2005). One way to illustrate the importance of finance in national economies is by the percent of value added by finance. In 1970, no affluent nation generated more than 10% of value added from the financial sector. By 2008, this figure had risen to at least 20% in 28 of 34 Organization for Economic Cooperation and Development (OECD) countries (Assa 2012). During the neoliberal era, the United States, United Kingdom, Japan, and Germany all experienced steady and significant increases in value added by finance, insurance, and real estate industries (Lapavitsas 2013).

Another way to examine the importance of finance is by comparing financial profits as a percent of total profits. Among affluent OECD nations, the United States had the most dramatic rise in financial profits. In 1981, approximately 20% of profits came from financial activities in the United States (Lapavitsas 2013). United States financial profits peaked around 38% in 2004, dipped to around 10% during the financial collapse of 2008, and rebounded back to around 35% in 2009 and 2010. In the 1980s, financial profits were often less than 20% of total profits in the United Kingdom, then dropped down to 10% of total profits during the 2000 dot com and tech bubble, and finally rebounded to around 30% in 2007 leading up to the Great Recession (Lapavitsas 2013). Japan faced a less pronounced, upward trending process. During 1980, financial profits made up approximately 10% of total profits in Japan (Lapavitsas 2013). Japanese financial profits peaked around 20% during the mid-1990s and then hovered between 13% and 17% for the remainder of the neoliberal era. In summary, there is substantial evidence that finance has become an increasingly powerful actor in national economies throughout the globe; however, the influence of finance varies across nations and over time.

As finance has become such an influential actor in the economies of affluent nations, it has increasingly become uncoupled from the productive sector, particularly manufacturing

(Lapavitsas 2013). The United States, one of the most financialized nations, epitomizes this process. In the early 1980s, the real annual compensation (wages and salaries) of the financial sector and the rest of the private sector were approximately equivalent (Wright and Rogers 2015). By 2008, financial sector workers were compensated approximately 2.5 times that of nonfinancial private sector workers. This has led some scholars to argue that liberal market economies like the United States, the United Kingdom, Canada, and Australia now have two separate economies within each nation (Lapavitsas 2013; Wright and Rogers 2015). First is the financial economy, which is highly profitable despite volatility and has strong income growth for workers. Second, the rest of the economy, including manufacturing, services, and other industries, has sluggish profits, increased reliance on labor-cutting technology and outsourcing, and stagnant or declining wages for workers. This creates a paradox in highly financialized nations: finance, which uses money to create more money, has begun to dominate the global economy without actually producing anything of real value (Lapatvitsas 2013). The real economy, which produces the items and objects that we use, has taken a back seat to finance and is struggling. This paradox serves as one of the major motivations for this dissertation: as finance has become unshackled from the real economy, what are the implications for these trends on income inequality within nations? And in what ways do different components of financialization impact different parts of the income distribution?

Finance became such a powerful actor in the United States, the United Kingdom, and other nations for two major reasons: deregulation and the movement from stakeholder to shareholder conceptions of the firm. These two major factors planted the seeds for finance to grow to be one of the most powerful actors in the economies of affluent nations. The discussion of financialization in the neoliberal era below primarily focuses on the United States because the

majority of financial transactions tend to have connections to or flow into the United States (Tabb 2007; Tabb 2010; Krippner 2011); however, similar trends in deregulation and a growing focus on corporate stock prices are apparent in many other affluent nations.

Financial Deregulation

Regulation over financial industries in the United States and other affluent nations has varied widely throughout the 20th and 21st centuries. While finance is an important component of the economy because it allows for the investment in future goods and services, the overextension of finance through debt-based activities can have devastating impacts on the general public. As a result, regulation over finance is important to limit the exposure of the general public to the risky actions of banks and other financial institutions. Since 1980, there has been increasing deregulation of financial industries, particularly in liberal market economies like the United States, United Kingdom, and Canada (Lapavitsas 2013). Deregulation, a key aspect of neoliberalism, of the financial sector is best understood by examining it historically. The following discussion will focus on the United States from the 1920s to the present; however, many other affluent nations experienced similar patterns in financial deregulation (Lapavitsas 2013).

During the 1920s, speculative activities and risk-taking were commonplace on Wall Street. Stock prices were soaring, business was booming, and the American jazz age ushered in an era of prosperity where the wealthy in the United States gained enormous economic and political power, which would not last forever. This would all come crashing to a halt on Black Friday October 25th, 1929 when the New York Stock Exchange crashed. Experts have identified a number of factors that contributed to the collapse, such as a weakly developed system of branch banks, excessive competition among financial institutions that led to excessive risk

taking, and the government's failure to provide a swift monetary response (Krippner 2011). Many scholars believe that the biggest contributor to the 1929 collapse was the union between commercial and investment banks.

At commercial banks, everyday citizens and businesses make deposits into banking accounts and then withdraw their money to pay for bills and other expenses. Most deposits in commercial banks are known as liquid assets, which means that the depositor has immediate access to their funds (Wright and Rogers 2015). Banks typically use deposits to make loans to other businesses and individuals. Those who deposit money in banks benefit from a small amount of interest on their accounts, which is paid to them by banks. Banks, on the other hand, make money off of interest rates attached to the loans that they provide. Each loan comes with a risk as there is always a chance that the borrower will not pay it back. Credit scores help banks to determine the risks associated with potential borrowers and their loans. Prime loans are given to individuals with good credit histories and stable sources of income. Subprime loans are those given to individuals with bad credit histories or who have unstable income sources. These distinctions are important in order for banks to prevent themselves to being exposed to too much risk in the lending market.

Investment banks, on the other hand, are banks that deal with capital markets directly and are often associated with much greater risk (Wright and Rogers 2015). Investment banks do not have depositors but instead gain capital from investors and loans from other banks. They also directly engage in speculative activities and try to minimize losses through derivatives, or investments that partially insure speculative activities if a loss occurs. When commercial and investment banking functions are combined in one bank, it creates a potentially disastrous

situation because banks are allowed to use the general publics' money, in the form of deposits, to engage in speculative activity.

After the 1929 crash, panic among average citizens ensued, which created "a run on the bank" (Wright and Rogers 2015). A run on the bank occurs when a financial crisis, such as a massive default of loans or a stock market crash, causes citizens to go to the bank and demand their deposits. At this time, the union between commercial and investment functions meant that banks were using deposits to invest in other speculative instruments and therefore did not have money in liquid assets to provide to their customers immediately. As news spread that banks were low on reserves and not issuing withdrawals, more people flooded to the banks to demand their money. Because banks issue loans to other banks and create an interlocking system of debt, failure at one bank can quickly spread to other banks causing a systemic crisis.

In response the calamity caused by the 1929 stock market crash to Glass-Steagall Act, which was passed in 1933 by the Roosevelt administration in response to (Krippner 2011). Glass-Steagall, also known as the Banking Act of 1933, contained several important provisions that prevented banks from exposing the public to excessive risk due to speculation of financial institutions. First, it created the Federal Insurance Deposit Corporation (FDIC), which is a federal agency that insures deposits up to sizable amount (currently $250,000) made in commercial banks and discourages risky investments. Even if a financial crisis occurs and a bank collapses, anyone with a deposit of $250,000 or less can get their full deposit refunded. Thus, the FDIC serves as an important financial protection for the general public. However, there are some negative consequences of the FDIC, which will be discussed later in this chapter.

Second, the Glass-Steagall Act had a clause to prevent banks from having both commercial and investment functions (Krippner 2011). By separating these two banking

functions, it prevented overly speculative activities by investment banks from using deposits of federally insured accounts (Krippner 2011). This serves two purposes. First, it provides additional protection from runs on the bank. Second, it helps to prevent speculative manias and crises as investment banks are limited in the amount of capital that they can use for speculation. While the provisions of the Glass-Steagall Act, as well as similar regulations in other nations, would help provide stability in U.S. and global financial markets for much of the post-World War II era, stagflation and a lack of financial capital during the 1970s encouraged capitalists to push for deregulation during the 1980s (Krippner 2011; Tomaskovic-Devey and Lin 2011).

Third, Glass-Steagall provided restrictions on banks mergers, which limited the size of banks (Krippner 2011; Tomaskovic-Devey and Lin 2011). Limiting the size of banks is important because if banks become too large then bank failure can have disastrous macro-economic impacts. Not only does it create major risks for consumers who hold deposits at large banks, but as banks increase in size then it also increases the likelihood that their assets will be tied to assets of other banks as they package loans and sell them. Most importantly, the creation of the FDIC meant that the government backs the loans of most commercial banks. If a bank were to get too large and subsequently default, then the federal government would have to step in to save that bank because a) the FDIC makes the government responsible for the loans and b) the failure of a very large bank would cause a massive financial crisis. As such, these bloated banks with huge financial assets are known as "too big to fail" (TBTF) banks because the government would be forced to bail them out even if they made poor speculative risks that result in massive losses (Wright and Rogers 2015). The deregulation of these three components of Glass-Steagall—the creation of the FDIC, the divorce of commercial and investment banking, and

restrictions on bank mergers—are vital for understanding the 2008 financial collapse, which will be discussed later in this chapter.

During the 1950s, regulation of the financial sector of the United States was at its peak (Wright and Rogers 2015). In the 1950s, a series of laws were passed that restricted the size of banks and limited them from operating across state boundaries. In response, Wall Street and other banks began a series of political moves to try to deregulate banks and other financial institutions. In their mind, regulations were constricting their profits and making them less competitive with banks in Europe. While their initial attempts were unsuccessful, banks would find more success several decades later as neoliberalism became the norm in American politics.

As discussed earlier in this chapter, the 1970s and 1980s were a period when capitalists and the wealthy mobilized to install neoliberalism as the primary frame for government economic policy in the United States and United Kingdom. During this period, the state's policies were oriented to favor market forces over government regulation to develop a business-friendly climate (Harvey 2005; Tomaskovic-Devey and Lin 2011). Stagflation during the 1970s caused bank profitability to drop dramatically. In response, the Federal Reserve Bank fought inflation by rapidly increasing interest rates (Krippner 2011). While this would reduce inflation, it also created huge profits for banks and other financial institutions and encouraged a frenzy of international investment from other nations, particularly Japan and China. These flows of international capital fueled debt-based consumption by consumers, corporations, and the U.S. federal government and fed U.S. financialization (Orhangazi 2008). Debt-based consumption also caused credit markets to expand in the United States as there was increased pressure to relax restrictions on the provision of credit.

Under the Carter administration, the 1980s began with a key law that helped propel financialization forward. The Banking Depository Institutions and Monetary Control Act of 1980 repealed a set of regulations associated with the Glass-Steagall Act, which were designed to limit risk in financial markets (Krippner 2011; Tomaskovic-Devey and Lin 2011). In particular, it released restrictions on bank merges, removed regulatory control over interest paid on savings accounts, and removed state usury caps on interest rates charged by financial institutions (Tomaskovic-Devey and Lin 2011:544). This act weakened the distinction between mutual funds, commercial banks, and savings and loan firms.

Financial deregulation continued during the presidency of Bill Clinton as Wall Street and other financial actors became more influential by increasing their lobbying efforts, which would culminate in 1999 with the repeal of Glass-Steagall. In 1994, the Riegle-Neal Interstate Banking and Branching Act allowed banks to operate across state lines (Tomaskovic-Devey and Lin 2011). Given that banks were allowed to merge and operate across state lines, the assets of the major banks in the United States grew steadily during the 1990s. During the 1990s, the Federal Reserve and the Securities and Exchange Commission (FEC) pulled back their regulatory role over finance and promoted complex and risky financial instruments such as derivatives and mortgage-backed securities, which were potentially more profitable, but also very risky (Krippner 2011).

Finally, the Financial Services Modernization Act of 1999 effectively repealed the last remaining regulations of Glass-Steagall by allowing investment banks, commercial banks, and insurance companies to combine operations. This was passed under Bill Clinton's administration; however, Congress was controlled by Republicans. Regardless, Wall Street had lobbyists working for both parties, which allowed them to achieve their policy goals. At this

time, Wall Street was effectively self-regulating. To summarize, by the year 2000 banks could a) grow to massive sizes due to a lack of restrictions on merges and interstate operations; b) were allowed to use complex and risky financial instruments; and c) were allowed to use the deposits of their customers in risky financial deals due to the reunion of commercial and investment bank functions with the guarantee that the federal government would insure their customers deposits if the bank were to fail. These three major characteristics of deregulation during the 1980s and 1990s would set the stage to a speculative bubble in the 2000s and the financial collapse of 2008, which I will discuss in greater detail later in this chapter.

Financial deregulation occurred in many other affluent nations as well. In 1970, Competition and Credit Control legislation began to dismantle international restrictions over British banks (Lapavitsas 2013). As a result, London became an even bigger player in the financial markets of Europe they were allowed to do more international transactions. Deregulation of banking policies throughout Europe in the 1990s led to a growth the size of banks throughout Europe, including the United Kingdom, Switzerland, Germany, and other nations (Lapavitsas 2012). As banks grew in size and deregulation increases, the exposure of the public to the risky activities of these banks increased. The 1996 Amendment of the Basel Accords made provisions to allow increased market risk as long as that risk was tied to securities (Lapavitsas 2013). As a result, bank balance sheets began to increasingly reflect security prices in open markets. Private credit agencies began to evaluate the risk of banks instead of government agencies. Given the ties between many financial organizations and the high profitability of risky financial actions, there were not incentives in place to curtail risk in financial markets. If anything, there were incentives to underestimate risk and encourage speculation. While deregulation and the size of banks tended to be much greater in the United

States, financial markets throughout Europe were exposed to similar risks leading up to the 2008 crash.

Shareholder Conception of the Firm

The deregulation of financial industries in the United States and other nations allowed Wall Street and financial institutions to make riskier and potentially more profitable moves in the global economy. Beyond political factors, there were also changes within nonfinancial firms that helped fuel financialization, specifically the development of the shareholder conception of the firm (Fligstein 2001; Davis 2009; Tomaskovic-Devey and Lin 2011). Before the 1980s, managerial decisions were typically based upon long-term goals such as profits, and managers would typically use profits to reinvest in productive infrastructure and workers. This process typically benefitted all of the stakeholders, or individuals interested in the performance of a company for reasons not related to stock appreciation such as workers and the local community. A variety of factors during the 1980s shifted incentives for managers to prioritize stock values and the interests of shareholders over stockholders. More than just firm strategy, the shareholder conception of the firm was based upon the idea that maximizing profits and stock values to satisfy shareholders would create a more efficient company (Fligstein and Shin 2007). This implies that no other constituency, such as workers, communities, or consumers, should matter quite as much when managers make decisions. The shareholder conception of the firm developed through a series of changes during the 1980s related to trends within and outside of firms, which I describe below.

During the 1970s and early 1980s, sluggish economic growth and high interest rates left many low stock prices while some larger corporations had large cash reserves (Krippner 2011). If companies failed to satisfy shareholders and started to sell their stocks, then stock prices would

fall. As stock values of many large firms fell, companies were at risk of being bought up by larger corporations in a series of hostile takeovers (Fligstein 2001; Fligstein and Shin 2007). Indeed, hostile takeovers became common practice during the 1980s. In the event of a hostile takeover, mangers are likely to lose their jobs as they are replaced as duplicate management personnel are streamlined. To avoid this scenario, companies began to focus more on increasing stock values because if stock values remained high then it was more difficult for other companies to buy them up in a hostile takeover.

Additionally, top management pay became linked to stock options rather than long-term market shares, sales, or production-based profits in an effort to increase stock values and prevent hostile takeovers and to make (Fligstein 2001; Fligstein and Shin 2007; Tomaskovic-Devey and Lin 2011). As a result, nonfinancial firms began to increasingly focus on shareholder value to the detriment of productive investments. Indeed, Orhangazi (2008) found that increased financial payments to managers resulted in significantly less capital investments in nonfinancial firms. To satisfy shareholder interests and attract investors, firms increasingly used mergers, layoffs, and labor-saving technology (such as automation), which led to reduced employment and pay, particularly in unionized workplaces (Fligstein and Shin 2007). These practices did not necessarily lead to increased profitability, however. Any profits were simply reinvested into the stock market instead of focusing on increasing market share, workers, or innovation. The shareholder conception of the firm also led to increased connivance within firms. Firms that prioritized shareholders over stakeholders were also more likely to engage in financial manipulation of their corporate accounts (Prechel and Morris 2010). While deregulation allowed managers and CEOs to manipulate financial markets and do risky activities, the shareholder conception of the firm provided increased incentives for this manipulation to occur

(Tomaskovic-Devey and Lin 2011). As a result, deregulation and the shareholder conception of the firm have implications for the growth of finance in the neoliberal era, as well as rising income inequality.

Contributions of this Dissertation to the Financialization and Inequality Literature

In this dissertation, I examine three components of financialization and their relationships with income inequality: finance, insurance, and real estate (FIRE) employment, credit expansion, and financial crises. FIRE employment has been rising steadily in affluent nations Assa (2012) shows that no OECD countries had more than 10% employment in finance in 1970; but 23 were above 10% in 2008, and seven were above 15%. Wage and income growth in finance has also outpaced other nonfinancial workers (Tomaskovic-Devey and Lin 2011; Lin and Tomaskovic-Devey 2013; Wright and Rogers 2015). In the United States, financial and nonfinancial sector workers had approximately the same real annual compensation, which includes wages and salaries (Wright and Rogers 2015). By 2007, financial sector workers were compensated nearly twice that of nonfinancial workers. During the 2008 recession, financial workers faced a small drop in pay; however, this would recover over the next few years while nonfinancial private sector workers' compensations remained flat.

Another important factor illustrating the power of finance is credit. Many nations experienced steady increases in the growth of credit—and relatedly public and private debt—over the last several decades (Dobbs et al.. 2015). In response to rising inequality and stagnant wages in the United States and other affluent nations, households began to rely on debt to maintain their standard of living (Lapavitsas 2013; Wright and Rogers 2015), a trend fueled the 2008 financial crisis. While household debt is important, there is less discussion about increased debt among private enterprises, particularly banks and other financial institutions, which played

an even bigger role in the 2008 collapse. As I will discuss later in this chapter, deregulation of finance set into motion a series of very risky processes that can have disastrous impacts on national economies and the general public.

Deregulation allowed the provision of credit in the private sector to expand rapidly in financialized nations (Krippner 2011; Lapavitsas 2013). Additionally, deregulation left banks and other financial institutions particularly exposed to risk as they were now allowed to increase debt that exceeded their assets. Further, they could bundle debt into packages and then resell the debt to other institutions, which set up an interlocking system of risk. If everyone pays back their debts on time and there are minimal defaults, then tidy short-term profits can be made. If a series of defaults occurs, then the interlocking nature of debt can lead to systemic crisis. So while higher rates of private sector debt have fueled risky financial ventures that can increase short-term profits, they can also lead to financial crises if left unchecked (Reinhart and Rogoff 2009). Because of increased financial interconnections across international borders, a crisis within one nation can trigger a global financial crisis, as evidenced by the 2008 Great Recession. Later in this chapter, I will discuss the theoretical literature linking each of these three components—FIRE employment, credit expansion, and financial crises—to income inequality in affluent nations.

However, before a detailed review of the literature on each of these topics, I provide a brief overview of some of the general limitations of previous research. Several recent studies examining the effect of financialization on income inequality have emerged in the fields of sociology, economics, and political science. While these studies have added to our understanding, there is room for advancement in the literature in several ways. For example, Zalewski and Whalen (2010) find a significant positive correlation between a financialization

index and the Gini index in 19 OECD countries in 1995 and 2004, but their study is based only on an examination of bivariate trends without adequate controls. A few studies (Tomaskovic-Devey and Lin 2011; Lin and Tomaskovic-Devey 2013; Arnum and Naples 2013) provide more rigorous statistical analyses of the effects of financialization and inequality in the U.S., but do not consider other countries. Other studies (Kus 2012; Assa 2012) encompass a wider sample of affluent countries, but either fail to incorporate adequate control variables or fail to utilize a time period that coincides with the era of neoliberalization. Epstein's (2005) edited volume provides an eclectic set of case studies on the effects of financialization in the economies of both affluent and developing countries, but none of the contributions offers a generalized account of these processes in affluent democracies.

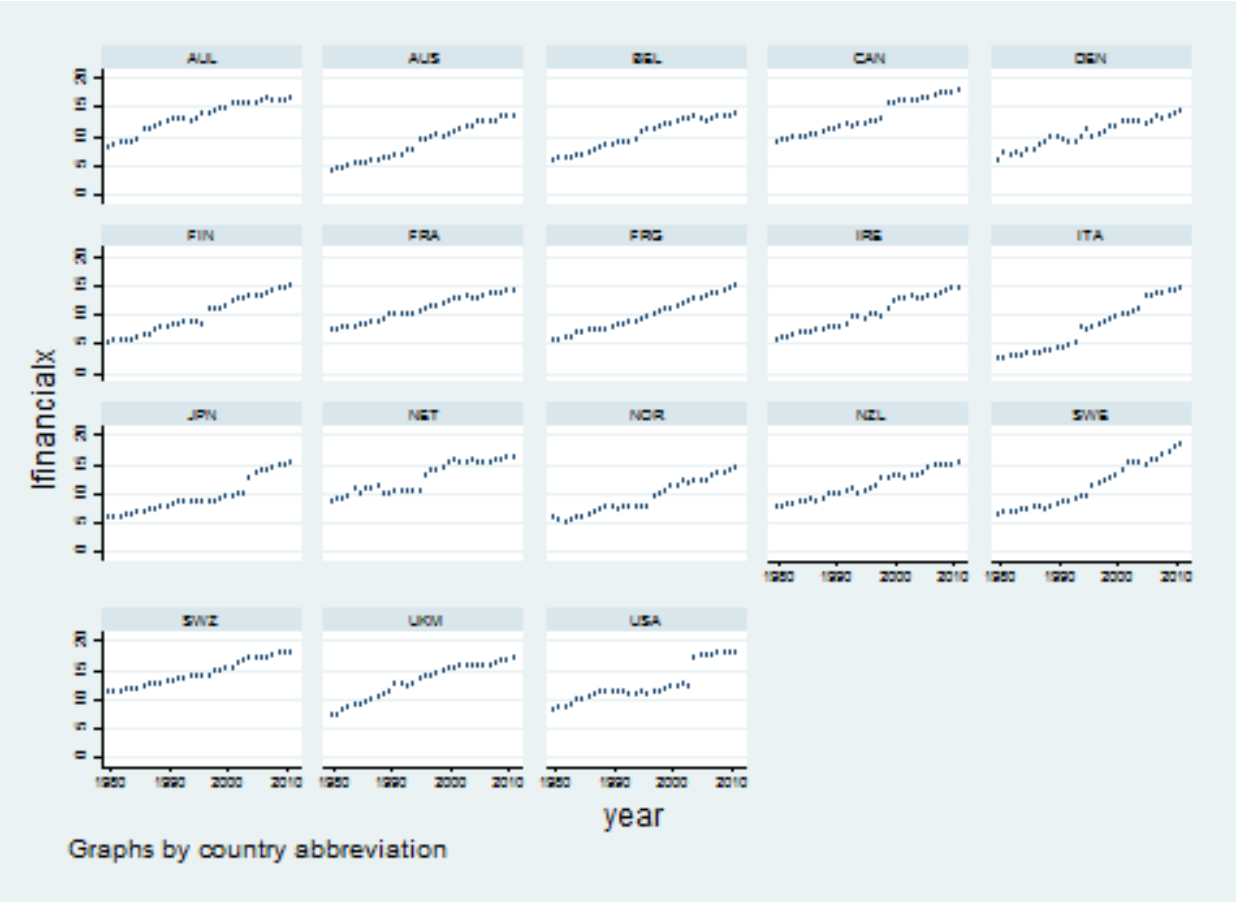
In addition, previous studies focus extensively on market-generated (MG) or state-mediated (SM) inequality alone and fail to consider other dimensions of inequality, which I examine in this dissertation. In Chapter 4, I examine MG inequality, redistribution, and SM inequality to determine how financialization impacts market inequality, taxes and transfers, and disposable income. Chapter 5 focuses on the incomes of the rich by examining the top 1% share. Finally, Chapter 6 examines other portions of the income distribution by exploring upper-tail inequality, lower-tail inequality, and top-bottom inequality. Also, with the exceptions of Assa (2012) and Kus (2012), these studies fail to consider more than a single dimension of financialization. My research overcomes these limitations by examining the effects of three distinctive dimensions of financialization—FIRE employment, credit expansion, and financial crises—on a variety of interconnected dimensions of inequality for a comprehensive set of 18 affluent democracies over the 31-year period that encompasses the neoliberal era.

FIRE Employment

The first aspect of financialization, FIRE employment, focuses on the growing share of workers associated with finance, insurance, and real estate industries, as well as secondary workers who provide ancillary services to these workers in market-based, financialized economies (Lapavitsas 2013). FIRE employment has been rising steadily in all 18 nations examined in this dissertation. In Figure 2.3, I present the trends for FIRE employment for each nation from 1981 to 2011. One of the most important things to note from these graphs is that there is the steadiness of the increase in FIRE employment across all 18 nations over this time period. The familiar case of the United States shows that less than 10% of workers were employed in FIRE industries in 1981. By 2011, nearly 20% of workers were employed in FIRE industries. The increase in FIRE workers in the United States was particularly dramatic after 2000 with a sharp increase around 2003, which is likely due to the deregulation of Wall Street and speculation in technology and real estate (Wright and Rogers 2015). Switzerland, a nation famous for its banking and financial sector strength, had comparable employment in FIRE industries. Despite Switzerland's prowess in finance and banking, Switzerland maintains a relatively robust welfare state, a highly-skilled labor force, and restrictive immigration policies given that they are not a member of the European Union, which shields many workers from the negative impacts of financialization (Hall and Soskice 2001). The United Kingdom is another major finance-oriented economy that saw rising FIRE employment in the neoliberal era. Financial services in the United Kingdom are centered in London, which serves as a major financial and trade hub in the Europe (Sassen 2001). Beyond Wall Street in New York City and London, many other affluent nations have global cities that act as financial nodes in the global

network, such as Amsterdam, Tokyo, Toronto, Stockholm, Frankfurt, and Paris, which have contributed to the growing representation in FIRE industries within the workforce.

Figure 2.3: Trends of FIRE Employment as a Percent of Total Employment by Nation, 1981 to 2011.



More broadly, the expanding share of employment in the FIRE sector is indicative of the growing economic clout of the financial sector. For instance, Assa (2012) showed that FIRE employment is highly correlated with share of value added in the FIRE sector, a more general indicator of the FIRE sector's importance. Also, FIRE employment and compensation coincide with other key financial indicators like financial profits and market concentration in the banking sector (Wright and Rogers 2015). Central to this surge in FIRE employment was the deregulation

of the financial industries. As discussed earlier in this chapter, the repeal of Glass-Steagall allowed banks to grow in both assets and employment due to relaxed restrictions on mergers, the division between commercial and investment banks, and the types of financial activities that banks could use (Krippner 2011; Lapavitsas 2013). Deregulation of the types of speculative activities helped give rise to larger investment banks, which manage an increasing array of complicated financial transactions. The growth of hedge funds, or large investment agencies that pursue highly speculative investments using borrowed funds and other risky activities in the pursuit of large capital gains, also led to a boom in employment in the financial sector (Lapavitsas 2013). Hedge funds were first developed in the 1990s in the United States but quickly spread throughout the globe as financial profits grew. As profitability in the financial sector grew, employment followed suit.

FIRE employment is connected not only to the growth of financial institutions, but also the financialization of non-financial firms which require ever-increasing financial services to manage debt and maintain profitability (Krippner 2011). Additionally, the growth of the financial sector is tied to speculation in real estate markets (Wright and Rogers 2015), as well as consumers' reliance on debt to offset stagnating wages (Leicht and Fitzgerald 2006). Thus, there are a variety of factors that fueled growth in employment in the finance, insurance, and real estate industries in affluent nations.

There is mounting empirical evidence that FIRE employment is associated with greater income inequality in both cross-national studies (Arnum and Naples 2013; Assa 2012) and U.S.-based studies (Moller, Anderson and Nielsen 2009). FIRE employment should positively influence income inequality for several reasons. First, employment in the FIRE sector disproportionately affects labor markets in financialized economies. Financialization extracts

rents from nonfinancial workers to disproportionately increase the pay of financial employees (Tomaskovic-Devey and Lin 2011; Lin and Tomaskovic-Devey 2013). This process can increase income inequality in several ways. First, it increases compensation of workers in the financial sector and incomes for the wealthy who make their income through capital gains. Second, it puts downward pressure on wages of nonfinancial workers, which would decrease earnings for the median worker. Third, it increases the demand for low-wage service workers who cater to the needs of financial workers, which would contribute to greater lower-tail inequality. Additionally, I expect that FIRE employment should decrease redistribution for two reasons: large financial institutions have been effective in lobbying for greater deregulation and a reduction in the size of the state. Also, most countries tax capital gains at lower rates than workers' earnings, which reduces the redistributive capacity of the state. Thus, I offer the following hypotheses:

Hypothesis 4.2: The percent of workers employed in FIRE industries will increase MG income inequality, decrease redistribution, and increase SM income inequality.

Hypothesis 5.2: The percent of workers employed in FIRE industries will increase the top 1% share.

Hypothesis 6.2: The percent of workers employed in FIRE industries will increase the upper-tail inequality, lower-tail inequality, and top-bottom inequality.

Credit Expansion

The second aspect of financialization is credit expansion, specifically the amount of credit extended to firms in the private sector relative to a country's economic output. Credit expansion is a fundamental aspect of financialization because it accentuates the role of financial

institutions in managing credit flows (Krippner, 2011). Generally, if credit is extended to the middle and working classes to purchase consumer goods like housing, it could decrease income inequality, particularly in low income nations. However, as larger shares of credit shift to businesses and financial institutions in the private sector, it tends to increase income inequality. In financialized capitalism, credit to businesses is used to bolster sagging profits, but economic instability often occurs when provisions to the private sector grow excessively (Lapavitsas, 2013).

Trends in private sector credit vary largely by country. In Figure 2.4, I present trends in private sector credit provided by the banking sector in 18 affluent nations from 1981 to 2011. On average, there is a general upward trend among the 18 nations. On one extreme, Japan began the 1980s with private sector credit that was around 200% GDP and increased to around 320% by 2011. While the United States is famous for fueling its public sector debt with loans from China and Japan (Lapavitsas 2013), Japan has consistently supported its own economic growth through high levels of public debt from the 1980s to the present. On the other extreme, Norway had private sector credit that was around 50% of its GDP in 1980 and around 100% of GDP in 2011. Anglo-Saxon nations, like Australia, Ireland, the United Kingdom, and the United States saw steady increases in private sector credit over the period. Other nations like France, Austria, and Norway had relatively stable levels of private sector credit.

Figure 2.4: Trends of Private Credit Provided by Banking Sector by Nation, 1981 to 2011.

In the neoliberal period, credit expansion occurs most often in deregulated financial environments. A major driver of the expansion of private sector credit is a practice known as leveraging, which means that banks and other firms make investments that are more highly dependent on borrowed assets (Lapavitsas 2013). Banks typically increase their leverage by taking out loans from other banks in order to use borrowed money to then make additional investments and financial gains. This creates an interlocking system of debt between banks and fuels speculation. Deregulation contributes to leveraging in a variety of ways, and the buildup to the 2008 financial crisis in the United States and other nations illustrates this process very well. First, repeal of Glass-Steagall allowed banks to merge and giving rise to mega-banks that were too big to fail (Wright and Rogers 2015). Second, the Financial Services Modernization Act

allowed banks to use deposits of their customers to engage in speculation in investment markets while at the same time the federal government, through the FDIC, insured that they would be bailed out if investments went sour (Krippner 2011; Wright and Rogers 2015). As one would expect, this incentivized banks to use their customers' money as extra capital to use in speculation during the 2000s. As I will discuss in greater detail in Chapter 5, leveraged investments can be potentially very profitable for firms and wealthy individuals in markets where prices are rising. When prices fall, losses can be dramatic, and the interlocking nature of the financial system exposes many to the risks associated with speculation. As a result, the financial sector sought to develop instruments to minimize risk for traders.

An important development in global financial markets during the neoliberal era that contributed to leveraging was the growth of derivatives markets, which were intended to help minimize risk for speculating investors (Lapavitsas 2013). Derivatives are a type of security, or tradable asset, which derives its value from the performance of another underlying financial instrument. Derivatives were initially designed to provide insurance for default and other downside risks. For example, if one wanted to invest in an agricultural firm's stock, you could buy a derivative based on rainfall for a region that would provide partial insurance in the event that a drought occurred, which would reduce crop yield and profits and thus reduce stock prices for that firm. As such, wealthy individuals can invest in derivatives to hedge their losses in the event of a bad deal (Guttman 2008). Many middle class Americans, who own stocks but do not have access to excess capital, are not able to take advantage of derivatives and other types of securitized investments. As a result, inequality is built into leveraged financial markets.

Most derivative occur in over-the-counter swaps, which means that they are traded and privately negotiated between two parties instead of on an exchange or through an intermediary.

In other words, they are largely unregulated (Lapavitsas 2013). While derivatives can be useful for speculators, they can create moral hazard in financial markets, especially because large investment banks tend to sell them (Tabb 2010). For example, it is estimated that JP Morgan had nearly $2.2 trillion in credit derivative exposure in mid-2006 just before the collapse. Lenders do not worry about the quality of derivatives because they believe that they are protected by the FDIC. As a result, they are not monitored closely, if they are monitored at all. And sellers of derivatives may not monitor them because they are quite complex. The problem is that complex derivative instruments are often highly leveraged and illiquid. As a result, the growth of the derivatives market led to increased risk in the financial system. Derivatives are potentially very profitable and at least provide some insurance in risky investments; however, they can also potentially lead to massive losses for banks in the event that a series of derivative investments failed.

While leveraged financial transactions potentially yield vast increases in profits for financial institutions, the interlocking nature of these transactions exposes financial institutions, non-financial firms, and consumers to excessive risk, bankruptcy, and financial crisis (Lapavitsas, 2013). Highly leveraged transactions played a major role in the 2008 financial crash in the United States and abroad by initially creating huge profits for speculators but later eventually led to massive losses as the entire system came tumbling down. The connections between credit, leveraging, and financial crises are further explored in the next section. In sum, the expansion of credit mainly serves the interests of large financial institutions and high-income individuals, so it should be positively associated with income inequality.

Studies of the impact of credit expansion on income inequality are rare, have tended to focus on developing countries, and have yielded mixed results. For example, in a study of 80

nations between 1960 and 1999, Beck, Demirgüç-Kunt, and Levine (2005) found that credit extended to households increased the incomes of the poor resulting in reduced income inequality. But since this examines household credit, the implications for private sector credit and inequality are uncertain. Canavire-Bacarreza and Rioja (2008) found that credit expansion in Latin America increased incomes in the top three quartiles but had no impact in the bottom quartile. The only relevant study examining private sector credit's impacts on income inequality in affluent nations is Flaherty's (2015) analysis of financialization's impact on the top 1% share of income. In this study, Flaherty found that a positive but nonsignificant effect on the top 1% share of income despite his hypothesis that it would increase incomes for the rich. Overall, I contend that credit expansion during the neoliberal era mainly increases income inequality by increasing financial sector profits and incomes for financial workers (Bank for International Settlements, 2001; Borrio and Lowe, 2002; Evans, 2003). While there is evidence that private sector credit can increase income inequality by increasing incomes for those at the top, it is unclear how it will impact the incomes of the median worker relative to the poor. Thus:

> *Hypothesis 4.3: The share of domestic credit provided to the private sector will increase MG income inequality, decrease redistribution, and increase SM income inequality.*
>
> *Hypothesis 5.3: The share of domestic credit provided to the private sector will increase the top 1% share.*
>
> *Hypothesis 6.3: The share of domestic credit provided to the private sector will increase upper-tail inequality and top-bottom inequality. It is unclear how it will impact the lower-tail inequality.*

Financial Crises

Finally, I consider the role of financial crises, measured as stock market crashes, which tend to accompany other types of financial crises (banking, default, or hyperinflation) or signal severe price fluctuations in important commodities like oil. Increasingly, scholars believe that financialized capitalism will become more volatile leading to more frequent and extreme boom and bust cycles as the social structures of accumulation increasingly rely on debt and leveraging (Minsky 1982; Harvey 2010; Lapavitsas 2013). Recent events such as the U.S. stock market and financial crisis in 2008 signal the vulnerability to financial collapse caused by excessive risk.

In the 2000s, speculation in real estate, fueled by what was assumed to be ever-rising housing prices, led to a housing bubble in the United States (Wright and Rogers 2015). Due to the deregulation of housing loans, there was an explosion of subprime loans, or loans to individuals who did not have standard credit scores or high enough incomes, which in turn increased the amount of risk in mortgage markets. Many subprime loans were issued as adjustable rate mortgages, which means that the interest rates were fixed for a short period of time but would later reflect market interest rates after the initial period expires. Additionally, banks often deceived some of their customers into acquiring subprime loans by misrepresenting their long-term costs, which is a practice known as predatory lending. Financial institutions would then package these toxic loans together and sell them to other banks as derivatives or mortgage-backed securities because this allows banks to issue new loans and gain more profits through the collection of interest (Tabb 2010). As a result, banks made tidy profits during the housing boom prior to the crash.

The problem with this process is that it created a highly leveraged interlocking system of debt from the mortgage markets. As interest rates peaked in 2007, many Americans began to default on their loans at unexpected rates (Wright and Rogers 2015). Housing values also began

to decline in 2007 in reaction to the increases in mortgage default. Large investment banks, like Lehman Brothers, began to fail as so much of their portfolio was tied to mortgage-backed securities. Lehman Brothers made most of its investments through leveraging, which connected its assets to many other banks. When Lehman Brothers filed for bankruptcy, it set up a domino effect in the system, and almost immediately American International Group (AIG) was sent over the edge. Panic ensued. Stocks began to plummet and credit froze as no one was willing to give out loans. Other large financial firms like Fannie Mae and Freddie Mac began to fail. Because of the FDIC and the rise of too big to fail banks, the federal government of the United States ultimately had to step in and use taxpayer money to bail out the banks and other financial institutions. Over the next few years, millions of Americans lost their jobs, had their pay frozen or cut, or lost their homes in the foreclosure crisis. Because investors and financial institutions had interlocking ties to American banks, the subprime crisis in the United States quickly became a full blown global crisis.

While there are a variety of different types of financial crises, I focus on stock market crashes in this dissertation because they represent volatility in financial markets. Given the importance of shareholder values of stocks in financialized capitalism, stock market failures can have large impacts on the decisions and strategies of firms, which have impacts on workers and the income distribution (Tomaskovic-Devey and Lin 2011). Additionally, stock market crashes are often associated with other financial crises, such as banking crises, hyperinflation, and sovereign default (Reinhart and Rogoff 2009). In Table 2.1, I present the frequencies and years of financial crises, operationalized as stock market crashes, in the 18 affluent nations between 1981 and 2011. Financial crashes occurred frequently among the 18 countries in the sample ranging from 4 crises in Australia to 13 in France. As discussed earlier, every affluent nation was

impacted by financial crisis during 2008 due to the interlocking nature of global financial institutions. The tech bubble and crisis of 2000 and 2001 affected all countries in the sample except for Australia and New Zealand. It is also worth noting that consecutive years of crises represent deeper and more long-lasting financial instability, which can have disastrous impacts on labor markets and the fiscal status of the state.

Table 2.1: Financial Crises for 18 Affluent Nations, 1981 to 2011

Countries	*Number of Crises*	*Years Occurred*
Australia	4	1981, 1982, 1990, 2008
Austria	9	1983, 1984, 1987, 1988, 1989, 1991, 1992, 2007, 2008
Belgium	9	1980, 1981, 1990, 1999, 2000, 2001, 2002, 2007, 2008
Canada	4	2001, 2002, 2007, 2008
Denmark	8	1980, 1984, 1986, 1987, 1992, 2001, 2002, 2008
Finland	7	1989, 1990, 1991, 2000, 2001, 2002, 2008
France	13	1980, 1981, 1982, 1987, 1990, 1992, 1993, 1994, 1995, 2000, 2001, 2002, 2008
Germany	10	1980, 1981, 1987, 1990, 1991, 1992, 2000, 2001, 2002, 2008
Ireland	8	2001, 2002, 2007, 2008
Italy	10	1981, 1982, 1987, 1990, 1991, 1992, 2001, 2002, 2007, 2008
Japan	11	1990, 1991, 1992, 1996, 1997, 1998, 2000, 2001, 2002, 2007, 2008
Netherlands	8	2000, 2001, 2002, 2008
New Zealand	5	1982, 1987, 1988, 1990, 2008
Norway	10	1982, 1986, 1987, 1990, 1991, 1992, 1998, 2001, 2002, 2008
Sweden	8	1990, 1991, 1992, 1995, 2000, 2001, 2002, 2008
Switzerland	6	1985, 1986, 1993, 1995, 1997, 2008
United Kingdom	4	2000, 2001, 2002, 2008
United States	10	1980, 1981, 1982, 1989, 1990, 1991, 2000, 2001, 2002, 2008

Like FIRE employment, financial crises are tied to the financialization of banks, non-financial firms, and households. As banks' liabilities dwarf their assets and non-financial firms and household debt increase to unsustainable levels, the risk of financial collapse rises (Reinhart and Rogoff 2009). Although scholars have speculated about how these crises relate to inequality, little empirical research has examined this topic. Two competing perspectives distinguished mainly by their impact on redistribution have emerged—the "austerity thesis" and the "welfare state stabilization thesis." To remind the reader, redistribution is the reduction in market-generated inequality caused by taxes and transfers. Thus, the difference between these two perspectives is based on how the welfare state responds to a crisis.

The austerity thesis contends that financial crises can negatively affect welfare state generosity by reducing resources to fund social programs and diverting resources to bail out failing financial institutions (Harvey 2010). The 2008 financial crisis offers a case in point: state efforts to reboot the economy prioritize policies to rescue "too big to fail" investments banks rather than policies to rescue the middle class or the poor. Private nonfinancial firms caught up in the collapse impose mass layoffs or wage freezes in order to cut losses, which further increases MG and SM inequality. The loss of tax revenues from businesses and workers creates a fiscal crisis that cripples the ability of the state to extend welfare programs to all who need them, thus decreasing redistribution. Following this logic, the austerity thesis predicts:

Hypothesis 4.4a: Financial crises will increase MG income inequality, decrease redistribution, and increase SM income inequality.

The welfare state stabilization thesis agrees with the austerity thesis that financial crises cause increases in MG and SM inequality, but differs about its effect on redistribution. This perspective argues that modern welfare states engage in "automatic stabilization" (see Dolls,

Fuest, and Peichl 2012) whereby a severe economic collapse activates existing social support programs to respond to displaced workers and other needy citizens or creates emergency programs to assist them. Supporting this view, Heathcoate, Perri, and Violante (2010) found that low-income households in the U.S. experienced larger losses in earnings relative to high-income households during recessions, but SM inequality did not increase as much as might be expected because of existing state programs. Similarly, Dolls et al. (2012) found that European nations had more redistributive capacity during crises than the U.S., yet not enough to offset the overall positive impact of crises on SM inequality (see also Baird 2014). Thus, the welfare state stabilization thesis predicts:

Hypothesis 4.4b: Financial crises will increase MG income inequality, increase redistribution, and increase SM income inequality.

The impact of financial crises like stock market crashes on different parts of the earnings distribution is less clear. As stated previously, the incomes of the affluent are typically less drastically impacted than the middle class and poor (Heathcoate, Perri, and Violante 2010); however, the wealthiest individuals may not follow this pattern. Given the fact that the incomes of the wealthiest individuals in affluent nations tend to be reliant on stocks, rentier, entrepreneurial and other financial sources (Alvaredo et al. 2013), the top 1% is likely to take a substantial hit in their incomes during a financial crisis. Despite this, we have seen the income growth of the top 1% outpace the rest of the population in the United States during the recovery after the Great Recession, which is a common trend of economic recoveries in many other affluent nations over the past few decades (Wolfers 2015). As a result, the income shares of the top 1% are likely to decrease for a few years after a financial crisis (Piketty and Saez 2015; Saez

2015). There have been fewer empirical studies of how crises impact the incomes of the rich in other nations.

That being said, there is evidence that low-income individuals and families are also at high risk during financial crises. Heathcoate, Perri, and Violante (2010) found that low-income households in the U.S. experienced large reductions in wages during recessions from 1967 to 2006 while high-income households were less affected. The middle class also receives fairly large reductions in incomes during financial crises (Heathcoate, Perri, and Violante (2010). Thus:

Hypothesis 5.4: Financial crises will decrease the top 1% share.

Hypothesis 6.4: Financial crises will increase upper-tail and top bottom inequality. It is unclear how it will affect lower-tail inequality.

2.4 Conclusion

The social structures of accumulation in the period from the 1980s to the present are characterized by increasing neoliberalism and financialization (Tabb 2010; Kotz and McDonough 2010). In Anglo-Saxon nations like the United States and United Kingdom, these processes have led to bifurcated economies (Lapavitsas 2013). One economy is based on finance, is often very profitable and experiences large amounts of income growth; however, its risky behaviors lead to crises that impact the general public. The other, based on manufacturing and services, often experiences sluggish growth of incomes and profits. Overall, there is increasing theoretical and empirical evidence that neoliberalism and financialization impact income inequality.

There are still some unanswered questions in the literature, however, which I explore in this dissertation. First I examine, does neoliberalism and financialization impacted income

inequality by creating more unequal market incomes, affecting redistribution, or both? Second, how has the top 1% been impacted by these processes? Third, how have upper- and lower-tail inequality been affected? In the next chapter, I describe the data and methods that I use to examine these questions. Chapters 4, 5, and 6 will examine these questions empirically.

CHAPTER 3: DATA AND METHODS

3.1 Data Sources and Descriptions

The primary data source for the dissertation is the Comparative Welfare States (CWS) dataset, compiled by Huber, Ragin, and Stephens (1997), updated through 2008 by David Brady and colleagues, with further additions and updates by Michael Wallace, Todd Vachon, and myself. For Chapters 4 and 5, I examine the effects of neoliberalism and financialization on several measures of income inequality between 1981 and 2011 in 18 countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States. These countries represent the most affluent capitalist democracies and are typically grouped together in analyses of income inequality. The analyses run from 1981 to 2011 for empirical and theoretical reasons. Empirically, several key variables are not available before 1980. Theoretically, these years coincide with the neoliberal period of capitalist development which emphasizes unfettered free markets, privatization, deregulation, free trade, and a reduced state role in markets and the provision of social services. The first year of the analyses, 1981, is generally acknowledged as the dawn of the neoliberal era (Tomaskovic-Devey and Lin 2011), and the last year, 2011, encompasses the Great Recession.

In Chapter 6, I use data from the Luxembourg Income Study (LIS) to examine how neoliberalism and financialization impact upper-tail and lower-tail inequality. The LIS data are appended to the CWS file used in Chapters 4 and 5 in order to link them with the key independent variables and controls. The LIS is the only international dataset available that includes individual level income data that allows one to derive information about specific shares of the income distribution. As a result, it is necessary to use the LIS given the research questions

of Chapter 6. In Table 1, I present the countries and years that are available in the LIS. In total, there are 16 countries (Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Sweden, Switzerland, the United Kingdom, and the United States) and 120 country-years that are available. Because New Zealand is not represented in the LIS and Japan only had data available for 2008, these countries will not be used in the Chapter 6 analyses. Given that the LIS data are not available for all 18 countries in all 31 years, the analyses in Chapter 6 will require the use of an unbalanced panel design, which means that each country will not have the same number of observations and years represented. In this data, Italy has the most observations (11) while Switzerland has the least (5).

Table 3.1: Luxembourg Income Study Data Availability, Countries and Years

Countries	*Number of Years*	*Years Available*
Australia	8	1981, 1985, 1989, 1995, 2001, 2003, 2008, 2010
Austria	6	1987, 1994, 1995, 1997, 2000, 2004
Belgium	6	1985, 1988, 1992, 1995, 1997, 2000
Canada	10	1981, 1987, 1991, 1994, 1997, 1998, 2000, 2004, 2007, 2010
Denmark	7	1987, 1992, 1995, 2000, 2004, 2007, 2010
Finland	7	1987, 1991, 1995, 2000, 2004, 2007, 2010
France	6	1984, 1989, 1994, 2000, 2005, 2010
Germany	9	1981, 1983, 1984, 1989, 1994, 2000, 2004, 2007, 2010
Ireland	8	1987, 1994, 1995, 1996, 2000, 2004, 2007, 2010
Italy	11	1986, 1987, 1989, 1991, 1993, 1995, 1998, 2000, 2004, 2008, 2010
Netherlands	8	1983, 1987, 1990, 1993, 1999, 2004, 2007, 2010
Norway	7	1986, 1991, 1995, 2000, 2004, 2007, 2010
Sweden	6	1981, 1987, 1992, 1995, 2000, 2005
Switzerland	5	1982, 1992, 2000, 2002, 2004
United Kingdom	8	1986, 1991, 1994, 1995, 1999, 2004, 2007, 2010
United States	8	1986, 1991, 1994, 1997, 2000, 2004, 2007, 2010

Dependent variables

For Chapter 4, I utilize three dependent variables, each derived from the Gini index, to capture different aspects of income inequality. The first is *market-generated inequality*, which represents the amount of income inequality generated by the market before taxes and social

transfers. This measure is calculated as the pre-tax, pre-transfer Gini index of household income inequality multiplied by 100. The second dependent variable is *redistribution*, which represents the percent reduction of market-generated inequality caused by state mediation via taxes and transfers. This is measured by subtracting state-mediated inequality (described below) from market-generated inequality, dividing by market-generated inequality, and multiplying by 100. The third dependent variable is *state-mediated inequality*, which represents the amount of income inequality after taxes and social transfers. This is measured as the post-tax, post-transfer Gini index of household income inequality multiplied by 100. In Chapter 5, there is just one dependent variable, the *top 1% share*, which represents the amount of income captured by the wealthy. This is measured as the percent of market-generated income (pre-tax and pre-transfer) reported on tax returns by the top 1% of earners.

All of the measures of inequality in Chapters 4 and 5 are taken from the Standardized World Income Inequality Database (SWIID), Version 4.0, compiled by Frederick Solt (2009; updated in 2013). The SWIID database is unique because it optimizes the comparability of countries (by measuring inequality in a standardized manner) and years (by estimating inequality for missing years). While the data in Chapters 4 and 5 come from the SWIID, Solt derived the data from different sources. The data in Chapter 4 use the Luxembourg Income Study (LIS) Gini indices of income inequality as the standard for the measures of MG inequality, redistribution, and SM inequality. The SWIID improves upon the LIS data by using a custom missing-data multiple imputation algorithm to standardize observations and estimate missing data from a variety of other sources like the OECD Income Distribution Database, Eurostat, the United Nations University's World Income Inequality Database, and the World Bank's PovcalNet (see Solt 2009 for more information). Solt derived the top 1% share data in Chapter 5 from the World

Wealth and Income Database (WWID), which was collected by Alvaredo, Atkinson, Picketty, and Saez (2013). Although the WWID is widely recognized as the gold standard for national data on top income shares and wealth inequality, it lacks cross-national comparability because of differences in the types of income and wealth data collected by different national agencies, as well as differences in whether data are collected at the individual or household level (Atkinson and Picketty 2010). Solt's SWIID data incorporates Monte Carlo simulation to derive standardized measures of inequality and to interpolate values of these measures for missing years which in turn overcomes the limitations of the WWID and permits cross-national comparisons. The SWIID data have been widely used by scholars interested in the causes and consequences of inequality.[1] For these reasons, the SWIID data are the optimal data for constructing cross-nationally comparable measures of income inequality for the analyses in Chapters 4 and 5.

For Chapter 6, I use the Luxembourg Income Study (LIS) to derive three measures of income inequality based upon the income shares of different percentiles. *Upper-tail inequality* represents the income disparity between the rich and the median worker. This is operationalized as the income ratio between the 90th percentile and the median (i.e., the 50th percentile). *Lower-tail inequality* represents the income disparity between the median worker compared to the poor. This is measured as the income ratio between the median of the income distribution and the 10th percentile. Finally, the *top-bottom inequality* represents the disparity between the rich and the poor and is measured as the income ratio between the 90th percentile and 10th percentile of the income distribution. Using these three measures allows me to triangulate how inequality is being affected at each point in the income distribution. These data are collected from the *Inequality and Poverty Key Figures* dataset provided by the LIS, which were derived from calculations using

[1]According to SCOPUS, the SWIID has been cited 190 times.

individual-level tax data collected from national tax agencies. These data are derived from disposable household income, or income after taxes and transfers have been accounted.

Neoliberalism variable

I include one measure of neoliberalism—the *neoliberal state*. This is a composite measure compiled by Gwartney, Lawson, and Hall (2013) representing the extent to which neoliberal policies have reduced state size in a nation.[2] The components of this measure include: a) general government consumption spending as a percent of total consumption; b) general government transfers and subsidies as a percent of GDP; c) government investment as a share of total investment; and d) the top marginal tax rate. The neoliberal state measure ranges from 0 representing a large, interventionist state to 8 representing a neoliberal state that has minimal size and influence in the market.

Financialization variables

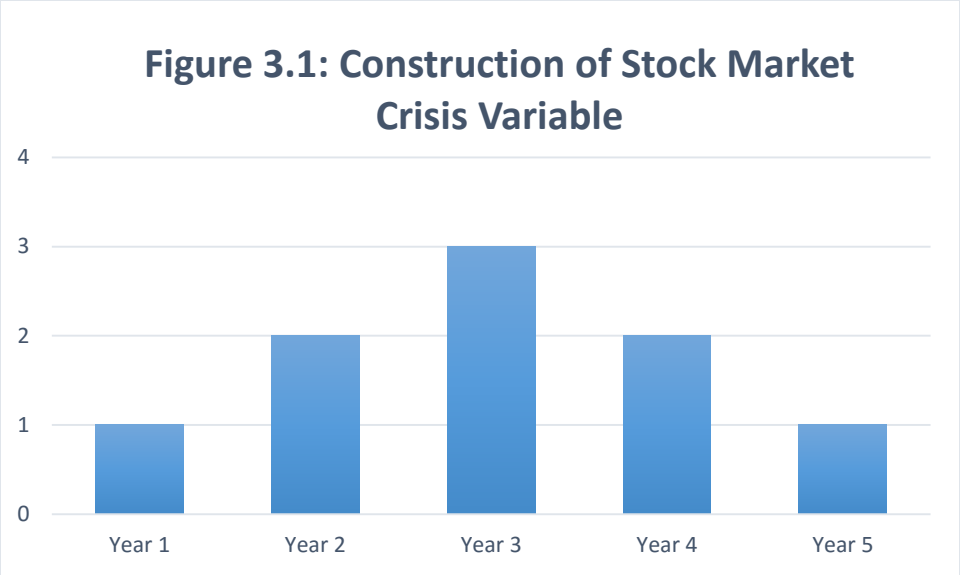
I conceptualize financialization as a multi-dimensional concept with three interrelated yet distinctive characteristics. First, *FIRE employment* is the percent of the labor force employed in finance, insurance, and real estate industries.[3] The second dimension is *credit expansion,* measured as the stock of domestic credit provided by the banking sector to the private sector as a percent of GDP. Credit expansion introduces new opportunities for leveraging—with attendant potential for greater financial gains, but also increased risk in financial markets—which has been

[2]These data were only available from 1980, 1985, 1990, 1995, and 2000-2011 so intervening values were interpolated. Overall, the values for the neoliberal state variable do not change much from observation to observation so interpolation should be relatively safe in this instance. Additionally, this is logical given that policy changes related to the neoliberal state tend to operate through slow-moving bureaucratic and political processes that do not change and fluctuate widely from year to year.

[3]An alternative measure, percent of value added by the financial sector, might be preferable, but this measure does not exist for all countries and years. However, for six countries with complete data on value added in the financial sector (Austria, Denmark, Finland, Italy, Netherlands, and Norway), it is correlated, on average, .91 with the employment-based measure I use.

overlooked in empirical studies of financialization and inequality. Finally, *financial crisis*, derived from Reinhart (2010) and Reinhart and Rogoff (2011), represents the occurrence of stock market crises and their after-effects over time.[4] Reinhart and Rogoff (2009) suggest that the aftershocks of these crises can last for at least three years. I suspect that the after-effects of financial crises on inequality may increase initially before slowly dissipating in subsequent years. As shown in Figure 1, I model this process with a five-year stepwise lag variable that starts at a value of 1 in the year of the crisis, increases to 2 in year 2, increases to 3 in year 3, declines to 2 in year 4, declines to 1 in year 5, and returns to 0 in year 6. When crises occur in adjacent years, the effects are cumulative. That is, the values for crises in adjacent years are added together, which allows consecutive crises to create greater dislocations than solo crises. Hypothetically, the financial crisis variable can vary between 0 and 9, reaching the highest value when there are crises in five consecutive years. Empirically, this variable achieves a value of 9 in two years in the data set, 1981 and 1982 for the U.S.

[4] While some of Reinhart and Rogoff's research has come under criticism lately (see, for example, Herndon, Ash, and Pollin 2013), these criticisms do not challenge the validity of their stock market crisis measure.



Control Variables

The analyses incorporate several control variables. I include two measures of the business cycle. The first is *economic growth,* which is measured as the annual percent growth rate of GDP at market prices based on constant 2000 U.S. dollars and is collected from the World Bank *National Accounts Data.* If economic prosperity tends to bring equal rewards to all citizens, then we would expect economic growth to decrease income inequality. If economic prosperity tends to benefit the rich over other groups, then we would expect economic growth to increase inequality. The second is *unemployment*, which is the unemployment rate for adult workers collected from the OECD Main Indicators. Unemployment is expected to increase income inequality because it is associated with a greater supply of workers relative to demand, which decreases the bargaining power of labor relative to capital.

Additionally, I use two measures of labor market structure. The first is *government employment,* which his measured civilian government employment as a percentage of total civilian employment and is collected from Cusack (2004). Second is *union density*, which is measured as union density as a percentage of wage and salary workers collected by Visser

(2013). Both government employment and union density are predicted to decrease income inequality because they tend to provide more middle-wage jobs with better worker protections.

Finally, previous research has extensively examined the link between globalization and income inequality, so I control for two measures of globalization. The first is *imports*, calculated by dividing the value of imports by Gross Domestic Product (GDP) for each country-year. Past research suggests that import penetration increases income inequality by providing products from low-wage countries that compete with domestically-produced products (Alderson 1999). The second indicator is *inward FDI*, which is inward foreign direct investment stock as a percent of GDP. Inward FDI generally reflects the search for lower-cost sources of labor and favorable tax policies that tend to increase income inequality. Two other measures of economic globalization often used in empirical analyses are outward FDI—representing investment in other nations—and immigration (see Wallace, Vachon, and Hyde 2016); however, these two variables will not be used in this dissertation in order to save degrees of freedom. Further, I added them to the models as robustness checks, and they do not cause major changes to the coefficients of the key neoliberalism and financialization variables.

3.2 Analytical Method

The analyses for Chapters 4 and 5 utilize single-equation error correction models (ECMs) (see Beck 1991; De Boef and Keele 2008) for 18 countries over 31 years (1981-2011), a total of 558 country-years. There are several methodological issues associated with time-varying data of this type that must be accounted for in the analyses. The most common problem is the presence of unit roots, or nonstationarity, which occurs in OLS estimation when variables are highly trended, causing changes in the independent variables to create long-lasting shocks in the dependent variables. I performed panel-specific Im-Pesaran-Shin unit root tests for MG

inequality, redistribution, and SM inequality, and found that the null hypotheses should be rejected in all three cases, suggesting that nonstationarity was present in at least one panel for each dependent variable. ECMs were selected in part because of their ability to address both problems of nonstationary and integrated variables (for example, see Kristal 2010; Lin and Tomaskovic-Devey 2013; Volscho and Kelley 2012). Another appealing aspect of ECMs is their ability to model both short-run effects and long-run equilibrium relationships, which has made them increasingly popular in sociological research utilizing cross-sectional, time series datasets.

Based on Hausman tests (c.f., Halaby 2004), I determined that fixed effects models are preferred over random effects. I include country fixed effects terms to account for time-invariant, country-specific factors that are unobserved in the data.[5] I also include continuous measures for time and time squared to control for cross-national influences of time. This procedure ensures that the estimates are derived from within-country variance in the rate of change instead of unobserved between-country differences. I employ panel-corrected standard errors (PCSEs) to correct for serial- and year-clustered heteroskedasticity (see Beck and Katz 1995), and I use a panel-specific, first-order autoregressive (AR1) correction to correct for serial- and year-clustered heteroscedasticity.

Following Lin and Tomaskovic-Devey (2013), I directly estimate the long-run multiplier effects—or simply "long-run" effects—of each measure and its standard error by estimating the Bewley transformed model (Bewley 1979) with the predicted change in income inequality. The single-equation ECMs in the analyses are specified as:

$$\Delta Y_{i,t} = \alpha_{1,i} + t + t^2 - \beta_1 Y_{i,t-1} + \beta_2 \Delta X_{i,t} + \beta_3 X_{i,t-1} + \varepsilon_{i,t}$$

[5]For example, there may be systematic country-level differences in the inequality data (e.g., what comprises income), differences in inequality in countries that have robust public pension systems and those that do not, or other unobservable characteristics that are due to the history or culture of a nation. Fixed-effects isolate these differences from the model thus focusing on within-country variation (Baltagi 2013).

where ΔY_t denotes the first difference $Y_t - Y_{t-1}$, $\alpha_{1,i}$ represents the country-specific deviation in change, t and t^2 represent the time trend, β_1 represents the adjustment or error correction rate of Y, β_2 represents the instantaneous effect of $\Delta X_{i,t}$ on the $\Delta Y_{i,t}$, and β_3 represents the short-run effect of $X_{i,t-1}$on ΔY. This modelling strategy is advantageous because it predicts instantaneous and short-run effects of the independent variables on the dependent variables. The model shows that, conditional on other covariates, a unit increase in ΔY_{t-1} leads to a $\beta_1$unit decrease in ΔY and therefore a $1 - \beta_1$ increase in Y_t. As a result, the long-run effect of a unit increase in X on Y is not only β_2, but the sum of an infinite geometric series:

$$\sum_{k=0}^{\infty} = \beta_2(1 - \beta_1)^2,$$

where k represents the number of discrete time units following the direct effect. This geometric series converges into $\beta_1^{-1}\beta_2$. To directly estimate the effect of X and its standard error, I estimate the Bewley (1979) model with the predicted ΔY:

$$Y_{i,t} = \beta_1^{-1}\alpha_{1,i} + t + t^2 - \beta_1^{-1}(1 - \beta_1)\Delta Y_{i,t} + \beta_1^{-1}\beta_2 X_{i,t-1} + \varepsilon_{i,t}.$$

To examine the robustness of the findings and identify influential cases, I estimate 18 jackknife models in which I replicate the models excluding one country at a time (510 cases each) to check the robustness of the significant coefficients. I use this procedure to identify the number of "discordant models" (out of 18); that is, models from the jackknife results that are not statistically significant or in the same direction as the effect in the overall model.[6]

[6] Another consideration in models like these is the possibility of Nickel bias, which occurs when country-level fixed effects are used with a lagged dependent variable (Nickell, 1981; Baltagi, 2013). Nickel bias can result in inconsistent estimators due to the correlation between the error terms. This is primarily a concern for small T, large N designs. However, as T gets larger relative to N, the potential for Nickell bias decreases (Baltagi, 2013). Since I have a large T (31 years), small N (18 nations) design, the potential for Nickell bias in the models is small. Nevertheless, I tried several alternative model specifications to

Due to the unbalanced nature of the data in Chapter 6, there some important variations to the analyses that were made. I use an unbalanced panel design because the Luxembourg Income Study (LIS) data are not available for all 18 countries in all 31 years. This analysis will have 16 countries and 120 country-year observations, and the average number of years available for each country is approximately 7.44. While the drawback to these data is a reduced sample size, these are the most appropriate data available for addressing the important questions in Chapter 6. The strength of these data is that they are derived from the actual microdata from tax returns that can then be aggregated up to create precise estimates of upper- and lower-tail income inequality.

The analyses in Chapter 6 focus on upper-tail inequality, lower-tail inequality, and top-bottom inequality. Because of the focus of this chapter, I use data from the Luxembourg Income Study (LIS), which is the only cross-national dataset available that provides data with sufficient detail on the entire range of the income distribution. To remind the reader, these LIS data yield an unbalanced sample for 16 countries and 120 country-years. This has several implications for the analysis in Chapter 6. First, two countries (Japan and New Zealand) are excluded altogether from the Chapter 6 analysis. Second, the "unbalanced" nature of the data means that countries in the sample are represented by anywhere from five (Switzerland) to eleven (Italy) years in the analysis (see Table 3.1 for details). Third, the sample for Chapter 6 is skewed toward the second half of the neoliberal period under consideration in this dissertation. In other words, the "balanced" sample for Chapters 4 and 5 consists of 18 countries for each year from 1981 to 2011 and is centered on a mean year of 1996. The "unbalanced" sample for Chapter 6 consists of 16

assess the robustness of the findings. I dropped the country-level fixed effects and added year fixed effects in a supplemental analysis. Overall, the findings are robust to a variety of different model specifications.

countries with a variable number of years per country and is centered on a mean year of approximately 1997.

The unbalanced design of the sample has four implications for the interpretation of the results in Chapter 6 as compared to those in Chapters 4 and 5. First, because the Chapter 6 sample is skewed toward the second half of the neoliberal period, this conceivably could result in different levels and restricted variation for the covariates in the analysis compared to the samples in Chapters 4 and 5. I examine this issue in greater depth below, but to foreshadow the discussion there, I found the variations in the sample to be relatively slight all things considered.

Second, the unbalanced sample used in Chapter 6 results in uneven intervals between LIS survey years for the various countries; that is, the intervals between survey years vary between one and ten years. For example, there are seven years between the first two LIS surveys for Austria and Ireland (1987 and 1994), but only one year between the second and the third years (1994 and 1995). This effectively means that the dependent variables cannot be constructed as change scores as in Chapters 4 and 5 and that the effects of the covariates in the analysis should be interpreted as their effects on *levels* rather than *changes* (or first differences) in the dependent variables. The unbalanced panel design does not, however, affect the lag structure of the covariates. Since all covariates are derived from the CWS, not the LIS, the one-year lags of all covariates are retained.

Third, unbalanced design of the LIS data undermines two key assumptions of ECM models, rendering this method unsatisfactory for the analyses in Chapter 6. The uneven time intervals between data points violates a key assumption of any multivariate time series technique that there are constant intervals between data points. And the inability to construct the dependent variables as first difference measures prevents ECM estimation. As a result of these limitations,

in Chapter 6 I utilize OLS regression with lagged independent variables, country-level fixed effects, and Driscoll-Kraay (Driscoll and Kraay 1998) standard errors. Below, I present the equations for the models used in the analyses:

$$Y_{i,t} = \alpha_{1,i} + t + t^2 + \beta_1 X_{i,t-1} + \varepsilon_{i,t}$$

where $Y_{i,t}$ equals the dependent variable at *t*, $\alpha_{1,i}$ represents the country-specific deviation in *Y*, *t* and t^2 represent the time trend, β_1 represents the effect of $X_{i,t-1}$ on *Y*, and $\varepsilon_{i,t}$ equals the error term. Flaherty (2015) used a similar method in his analyses of financialization's impacts on the top 1% for 14 nations between 1990 and 2010.

OLS regression with lagged independent variables, country-level fixed effects, and Driscoll-Kraay (Driscoll and Kraay 1998) standard errors addresses three of the four major problems that are typically present in macroeconomic time series analysis: autocorrelation, panel heteroscedasticity, and cross-sectional dependence. Driscoll-Kraay standard errors are an extension of common nonparametric covariance matrix estimation techniques that yield standard error estimates that are robust to general forms of autocorrelation, panel heteroscedasticity, and cross-sectional dependence (Driscoll and Kraay 1998; Hoechle 2007). The Driscoll-Kraay estimator is derived from standard heteroscedasticity and autocorrelation consistent covariance matrix estimation techniques (c.f., Parks 1967; Kmenta 1986; Newey and West 1987; Andrews 1991; Beck and Katz 1995), but it provides a more adequate means to address cross-sectional (e.g., spatial) dependence.

The fourth potential problem associated with macroeconomic time series is the issue of unit roots, which ECMs address by differencing and lagging the dependent variables in order to make them stationary. However, the unbalanced panel design of the LIS data make these computations problematic. It is unclear that unit roots are a problem in these data. However, in

an effort to determine if unit roots were present, I ran Fisher unit root tests which are designed to examine unit roots in unbalanced panel data; however, the sample size (N=120) is not large enough for the test to run properly. As a result, it is impossible to determine whether or not these data have unit roots. Thus, to summarize, OLS regression with lagged independent variables, country-level fixed effects, and Driscoll-Kraay standard errors resolves three of the four common problems that were addressed by ECMs, and it is impossible to determine if the fourth problem—unit roots—are a problem in these data.

Another consideration related to Chapter 6 is the extent to which values of the independent variables in the smaller sample of years (120) is different from the values of the independent variables in Chapters 4 and 5 in the larger sample (540). I will explore this particular issue in greater detail later in this chapter. To foreshadow for the reader, there are differences between the samples in Chapter 4 compared to 5 and 6; however, these differences are not substantial.

Finally, the fourth implication for the analysis in Chapter 6 is the considerably smaller sample size (N=120) compared to the sample size of the design used for Chapters 4 and 5 (N=540). As a result parameter estimates of the same magnitude are less likely to achieve statistical significance by conventional standards, all else equal. This means that extra caution must be used in drawing substantive conclusions from the analysis in Chapter 6.

In summary, error correction models are not practical for the analyses in Chapter 6 because of the unbalanced panel design of the LIS data, which yields a small sample size and uneven intervals between observations. Therefore, in Chapter 6 I use OLS regression with country fixed effects and Driscoll-Kraay standard errors, which adequately address common problems in macroeconomic, time series data such as autocorrelation, panel heteroscedasticity,

and cross-sectional dependence. This method leaves the problem of unit roots unaddressed, however. Even with this limitation, the importance of addressing this aspect of the relationship between neoliberalism, financialization and income inequality justifies the analyses in this chapter. Given the limitations of the data, OLS estimation with country fixed effects and Driscoll-Kraay standard errors is the best method for these analyses.

3.3 Descriptive Statistics

The descriptive statistics for the three income inequality measures used in Chapters 4 and 5, as well as the lagged values of the shared independent variables, are presented in Table 3.2. For Chapter 4's key independent variables MG income inequality has a mean of 40.27, a standard deviation of 5.01. MG inequality was lowest in Belgium during 1985 with a value of 26.82. MG inequality was highest in Sweden in 2011 with a value of 49.08, which may be surprising given that Sweden is often known as being a very egalitarian nation. However, recall that this figure represents the level of inequality prior to redistribution and reveals one of the limitations of exclusively studying pre-tax, pre-transfer inequality. Redistribution reduced inequality by an average of 29.38%, which means that SM inequality is 29.38% less than its value for MG inequality for the average nation. Redistribution has a standard deviation of 10.86%. There is a relatively large range in redistributive capacity: the minimum is 4.02% for New Zealand in 2008 while the maximum is 52.65% for Sweden in 2003. So while Sweden has some of the highest values for MG inequality, it also heavily redistributes through taxes and transfers thus making it one of the most equal affluent nations in the world. Finally, as expected, SM inequality is lower than MG inequality because all nations in the sample redistribute and reduce MG inequality to varying degrees. The mean value for SM income inequality is 28.16, the standard deviation is 4.13. SM0 inequality ranges from 19.22 for Finland in 1983 to 37.80 for

United States in 2007, which is the year of the Great Recession. Scandinavian nations, like Sweden, Norway, and Finland, have some of the lowest values for SM inequality. For Norway and Finland, this is accomplished through medium levels of MG inequality and medium levels of redistribution. As mentioned earlier, Sweden maintains low levels of SM inequality despite very unequal market incomes because it has substantial redistributive policies. Anglo-Saxon nations, like the United States and United Kingdom, typically have the highest values for SM inequality. This is because market incomes are very unequal in these nations, but they also rank very low in redistribution.

Table 3.2. Chapters 4 and 5 Descriptive Statistics for Dependent and Independent Variables for 18 Affluent Capitalist Democracies 1981-2011 (N=540)

Variable	Mean	S.D.	Min	Max
Chapter 4 Dependent Variables				
MG inequality	40.27	5.01	26.82	49.08
Redistribution	29.38	10.86	4.02	52.65
SM inequality	28.16	4.13	19.22	37.8
Δ MG inequality	0.2	1.27	-5.55	6.85
Δ Redistribution	0.12	2.02	-11.8	12.61
Δ SM inequality	0.1	0.6	-2.18	2.6
Chapter 5 Dependent Variables				
Top 1% share	8.16	2.79	3.49	18.33
Δ top 1% share	0.08	0.69	-8.74	4.96
Business cycle				
Unemployment (t-1)	6.86	3.26	0.18	17.15
Economic growth (t-1)	2.32	2.28	-8.54	10.92
Labor market structure				
Government employment (t-1)	17.01	6.64	5.34	31.78
Union density (t-1)	40.30	20.76	7.58	87.44
Globalization				
Imports (t-1)	33.63	16.03	6.87	84.08
Inward FDI (t-1)	28.45	32.98	0.00	200.28
Neoliberalism				
Neoliberal state (t-1)	4.71	1.34	1.63	7.46
Financialization				
FIRE employment (t-1)	11.10	3.37	2.52	18.33
Credit expansion (t-1)	120.14	57.54	22.90	328.99
Financial crisis (t-1)	2.24	2.37	0.00	9.00

Because the ECM models examine change scores, I also present descriptive statistics for the change scores for MG inequality, redistribution, and SM inequality. On average, MG inequality increased by .2 units per year in the sample with a minimum value of -5.55 and a maximum value of 6.85. On average, nations in the sample increased redistribution by around

.12% per year. This ranged from -11.8% and 12.61%. Finally, SM inequality increased by around .1 units per year. This ranged between a -2.18 and 2.6. As one can see, MG inequality and redistribution had more year-to-year variation while SM inequality was relatively stable.

The only dependent variable for Chapter 5 is the top 1% share of income. The top 1% share has an average value of 8.16%. The top 1% share ranges from 3.49% in Finland in 1983 to a whopping 18.33% for the United States in 2007. This matches up closely with the low and high years and nations for SM inequality. Looking at the change in this measure, on average, the top 1% share increases by .08% each year in the sample. The year-to-year change in the top 1% share is rather volatile, however: it ranges between -8.74% and 4.96%. As I shall show, these changes are largely dependent on the economic, political, and financial conditions of a nation.

Among the key independent variables in Chapters 4 and 5, the neoliberal state variable has a mean value of 4.71 with a standard deviation of 1.34. With a theoretical range of 0 to 8, this variable varies from 1.63 to 7.46 where lower values represent larger, more interventionist states while higher values represent smaller states preferred by advocates of neoliberalism. For most countries, states become increasingly neoliberal from 1981 to 2011, especially after the year 2000. The exception to this pattern is Netherlands, which actually had a less neoliberal state in 2011 than it did in 1981.

Among the financialization variables, FIRE employment has a mean value of 11.10%, a standard deviation of 3.37%, and ranges from 2.52% to 18.33%. Overall, FIRE employment rose steadily in every nation in the sample, which reinforces the validity of this measure as an indicator of financialization. Credit expansion, or credit provided to the private sector as a percent of GDP, has a mean of 120.14%, a standard deviation of 57.54%, and ranges from 22.90% to 328.99%. In other words, the stock of outstanding credit in the average country-year

exceeds the annual GDP, indicating that countries have become extremely reliant on credit and debt during the neoliberal period. There are two major types of trends for private sector credit in this sample. Some nations, like Austria, France, and Norway, remained relatively stable. Other nations, like Ireland, Japan, the United Kingdom, and the United States, saw rapid increases in private sector credit. Japan is the only country that started with relatively high levels of credit in 1980, nearly 200% of GDP, and ended with even an even higher percentage in 2011, which was almost 300% of GDP. Finally, the financial crisis variable has a mean of 2.24 and a standard deviation of 2.37 and ranges from 0 to 9. This variable achieves a value of 9 in two years in the data set, 1981 and 1982 in the U.S, following a tumultuous period of several crises during the late 70s and early 80s. Altogether, financial crises and their ripple effects occurred in about 24% of the country-years in this study.

Finally, I will discuss the control variables. Among the business cycle variables, unemployment was on average around 6.86% in the sample. This ranged from a very small value of .18% to a very large value of 17.15%. Economies on average were growing in during this time period, as well. On average, economic growth was 2.32% and ranged from -8.54% to 10.92%. I control for the labor market structure using government employment and union density. Government employment was on average 17.01% in the sample and ranged from 5.34% to 31.78%. Union density, a measure of labor strength, was on average 40.30% in the sample; however, there was significant variation. Union density ranged from 7.58% to 87.44%. Finally, I control for two measures of globalization: imports and inward FDI. Imports was on average equivalent to approximately 33.63% of GDP in the sample and ranged from 6.87% and 84.08% of GDP. Inward FDI was on average 28.45% of GDP; however, this ranged widely from 0 to 200.28% of GDP.

As discussed earlier in this chapter, the analysis in Chapter 6 utilizes an unbalanced panel design with 120 cases compared to the balanced panel design of Chapters 4 and 5, which has 540 cases. Due to data availability for the dependent variables from the Luxembourg Income Study, there are uneven gaps between observations in Chapter 6, and some nations have more observations than others in the sample. Additionally, Japan and New Zealand were dropped from the sample due to a lack of data. While different dependent variables are used in Chapter 6, the same independent variables from the Comparative Welfare States dataset with one-year lags are used.

Because of the unbalanced panel design and different dependent variables used in Chapter 6, a separate set of descriptive statistics for these analyses are presented in Table 3.3. There are three dependent variables in Chapter 6: upper-tail inequality, lower-tail inequality, and the top-bottom inequality. The reader should note that I do not present change values for the Chapter 6 dependent variables because this chapter assesses the determinants of *levels* of inequality rather than *changes* in inequality. While change values are used in the ECMs in Chapters 4 and 5, they are not used in Chapter 6 because of the uneven time periods between observations. Turning first to the dependent variables, upper-tail inequality, measured as the 90-50 income ratio, has an average value of 1.83, which means that the 90^{th} percentile's income is on average 1.83 times larger than the median worker's. Upper-tail inequality has a standard deviation of .18 and ranges between 1.51 for Finland in 1987 and 2.19 for the United States in 2010. Lower-tail inequality, measured as the 50-10 income ratio, has a mean value of 1.99. This means that the median worker on average has 1.99 times more income than the 10^{th} percentile. Lower-tail inequality has a standard deviation of .25 and ranges between 1.61 for Sweden in 1981 and 2.72 for the United States in 1986. Finally, the top-bottom inequality, measured as the

90-10 income ratio, has a mean value of 3.67. This shows that the 90th percentile earns on average 3.67 times more income than that of the 10th percentile. Top-bottom inequality has a standard deviation of .80 and ranges between 2.43 for Sweden in 1981 and 5.73 for the United States in 2007, which was the year of the Great Recession.

There are several important things to note in the patterns of these data. First, the United States has the highest values for all three dependent variables. Given that the United States has some of the highest levels of neoliberalism and financialization, this is not surprising. Other Anglo-Saxon nations, like the United Kingdom, Canada, New Zealand, and Australia, tend to rank high on the measures of SM inequality. Second, the lowest values tend to be in Scandinavian countries like Finland and Sweden, which have historically resisted neoliberalism and have strong welfare states and labor movements. Nations ranking in the middle of the pack of SM inequality include Austria, France, Germany, Ireland, Italy, Japan, the Netherlands, and Switzerland.

Table 3.3. Chapter 6 Descriptive Statistics for Dependent and Independent Variables for 16 Affluent Capitalist Democracies 1981-2011 (N=120)

Variable	Mean	S.D.	Min	Max
Chapter 6 Dependent Variables				
Upper-tail inequality	1.83	0.18	1.51	2.19
Lower-tail inequality	1.99	0.25	1.61	2.72
Top-bottom inequality	3.67	0.80	2.43	5.73
Business Cycle				
Unemployment (t-1)	7.45	3.34	0.18	17.15
Economic growth (t-1)	2.00	2.84	-8.54	9.92
Labor Market Structure				
Government employment (t-1)	17.74	6.32	8.32	31.41
Union density (t-1)	40.17	20.26	7.75	87.44
Globalization				
Imports (t-1)	33.96	15.27	9.97	75.35
Inward FDI (t-1)	27.50	25.75	0.00	140.04
Neoliberalism				
Neoliberal state (t-1)	4.69	1.33	1.63	7.29
Financialization				
FIRE employment (t-1)	11.35	3.39	3.43	17.84
Credit expansion (t-1)	116.68	46.64	42.05	235.52
Financial crisis (t-1)	2.19	2.34	0.00	7.00

An important purpose of this table is to assess the extent to which the skew of the LIS-based sample in Chapter 6 influences the means and standard deviations of the covariates compared to the overall sample in Chapters 4 and 5. To remind the reader, the Chapter 6 sample is slightly skewed toward the latter half of the neoliberal era. I ran t-tests to determine the differences in the mean values for the independent variables in Chapters 4 and 5 versus those in Chapter 6. There are statistically significant differences in the mean values of four variables: unemployment, economic growth, government employment, and FIRE employment variables. Unemployment, government employment, and the FIRE employment had higher mean values in

the Chapter 6 sample. The higher values in Chapter 6 are likely due to the sample being skewed towards the latter period, which is more heavily dominated by neoliberalism. Economic growth had a higher mean value in Chapters 4 and 5. These small differences on the four variables may have *some* effect on the interpretation of the results, but overall the effect should be slight.

Among the key independent variables in Chapter 6, the average value for the neoliberal state was 4.69 with a standard deviation of 1.33. This ranged between 1.63 for Sweden in 1981 and 7.29 for the United States in 2004. FIRE employment was on average 11.35% of total employment in the sample with a standard deviation of 3.39%. FIRE employment was lowest in Italy during 1986 with a value of 3.43% and highest in the United States during 2010 with a value of 17.84%. Credit expansion, measured as private sector credit as a percent of GDP, had an average value of 116.68% with a standard deviation of 46.64%. Credit expansion ranged between 42.05% for Australia in 1985 and 235.52% for the United States in 2007. Finally, financial crises had a mean value of 2.19 units and a standard deviation of 2.34. This ranged between 0 and 7, which occurred 8 times in the sample. The values of the four key independent variables are largely similar to those in Chapter 4 and 5; however, a notable difference is that credit expansion has lower values because Japan, which was dropped from the LIS data since it had only one observation, runs so much of its economic output using private sector debt.

In chapter 4, I control for several other alternative factors that may be driving upper- and lower-tail inequality. I control for two business cycle variables to account for changes in the economy of nations. The mean unemployment was 7.45% in the sample with a standard deviation of 3.34%. Economic growth was on average 2.00% with a standard deviation of 2.84. Among the labor market structure variables, government employment was on average 17.74% with a standard deviation of 6.32%. Among the civilian workforce, the average nation in the

sample had 40.17% as members of a union. This had a standard deviation of 20.26%. Finally, I control for two measures of globalization: imports and inward FDI. Imports were on average 33.96% of GDP in the sample and had a standard deviation of 15.27%. The mean value for inward FDI was 27.50% of GDP and had a standard deviation of 25.75%. The values for the controls are largely similar to those in Chapters 4 and 5.

Overall, these data and methods give me the ability to analyze the motivating questions of this dissertation. Chapter 4, the next chapter, examines how neoliberalism and financialization impacts income inequality before taxes and transfers (MG inequality), redistribution, and income inequality after taxes and transfers (SM inequality). Chapter 5 explores how neoliberalism and financialization have affected the income shares of the rich, operationalized as the top 1% share of income. And finally, Chapter 6 investigates whether neoliberalism and financialization benefit the rich at the expense of the middle class, the poor, or both through analyses of upper-tail inequality (the income ratio between the 90^{th} and 50^{th} income percentiles), lower-tail inequality (the income ratio between the 50^{th} and 10^{th} percentiles), and top-bottom inequality (the income gap between the 90^{th} and 10^{th} percentiles). I now turn to the heart of the empirical analyses for the dissertation.

CHAPTER 4: NEOLIBERAL REFORM, FINANCIALIZATION, AND INCOME INEQUALITY IN 18 AFFLUENT CAPITALIST DEMOCRACIES

4.1 Introduction

During the neoliberal era, neoliberalism and financialization are two of the dominant transformations to the social structures of accumulation in affluent nations that have shaped capital accumulation and are increasingly linked with income inequality (Kotz and McDonough 2010). While previous research has found that financialization increases income inequality (Zalewski and Whalen 2010; Tomaskovic-Devey and Lin 2011; Assa 2012; Arnum and Naples 2013), there are several unresolved issues that this chapter examines in order to provide additional insight into these processes. Previous studies of financialization's effects on income inequality have largely focused on either MG or SM inequality alone (Zalewski and Whalen 2010; Assa 2012; Arnum and Naples 2013) or have examined income differentials between financial and nonfinancial industries in the United States (Tomaskovic-Devey and Lin 2011). From this literature, it is unclear whether financialization is simply creating more unequal market incomes, putting fiscal pressure on the state to reduce welfare state capacity and redistribution, or if it is affecting both. Additionally, previous studies have largely focused on one or two measures of financialization, often FIRE employment and occasionally FIRE value added to GDP. While I agree that these measures are appropriate representations of some aspects of financialization, there are other aspects of financialization in the literature, such as credit expansion and financial crises, which are largely unexplored in empirical studies.

In this chapter, I examine how one measure of neoliberalism, the neoliberal state, and three measures of financialization impact three measures of income inequality—market generated (MG) inequality, redistribution, and state mediated (SM) inequality—in 18 affluent

nations from 1981 to 2011 to address these shortcomings in the literature. The three measures of financialization are FIRE employment, credit expansion, and financial crises. The primary research question in this chapter is: *Do neoliberalism and financialization impact income inequality by creating more unequal market incomes (represented by MG inequality), by affecting redistribution, more unequal incomes after taxes and transfers (represented by SM inequality), or a combination of the three?* This information will provide a greater understanding of the mechanisms that link these processes to income inequality.

Additionally, this chapter examines the timing of the effects of neoliberalism and financialization on income inequality by examining instantaneous, short-run, and long-run effects using error correction models (ECMs). Previous studies of neoliberalism, financialization, and income inequality have primarily used traditional time series methods, which make assumptions about the lag lengths of the independent variables. In review of the discussion of Chapter 3, ECMs allow one to simultaneously estimate instantaneous, short-run, and long-run effects. To anticipate the results below, I find that most of the effects are long run so that is the primary focus of this chapter. ECMs are also advantageous because they can address several methodological problems common in macroeconomic time series analyses, namely units roots, autocorrelation, and panel heteroscedasticity (De Boefe and Keele 2008). Below, I discuss the theoretical links between neoliberalism, financialization, and income inequality, as well as develop hypotheses for the analyses.

4.2 Theory and Hypotheses

Chapter 4 serves as the empirical lynchpin to this dissertation and sets the stage for the analyses in Chapters 5 and 6, which focus on different parts of the income distribution. As such, much of the theory related to this chapter was discussed in Chapter 2 as a way to frame the main

theoretical arguments of this dissertation. To remind the reader, I reiterate the hypotheses associated with this chapter below, which were introduced in Chapter 2, as well as provide brief justifications of those hypotheses.

The transformation of the role of the state in shaping markets and social welfare is one of the hallmark characteristics of neoliberalism in the current SSA (Kotz and McDonough 2010). There are several important changes in the state's role in the market and social welfare that have occurred during this period, which are captured by the neoliberal state variable that I use in my analyses. First, there has been a reduction in the tax burden of the wealthy in many affluent nations (Kotz and McDonough 2010). In the neoliberal era, the burden primarily falls on wage earners and other groups. Second, the state has played a lesser role in the creation of aggregate demand (Harvey 2005; Kotz and McDonough 2010). During the post-World War II era, many states used public spending and investment to supplement market demand in order to boost economic growth and reduce unemployment. During the neoliberal era, it has been argued that the state should minimize spending in order to minimize inflation but at the expense of economic growth and unemployment. Third, there has been a reduction in state-sponsored social programs that supplement the wages of working individuals, such as pensions, unemployment insurance, and educational subsidies (Harvey 2005; Kotz and McDonough 2010; Wright and Rogers 2015). These cuts have reduced the incomes of the middle and working class after taxes and transfers. Fourth, many public goods like transportation, social welfare programs, education and job training have been cut or privatized, thus reducing redistribution (Harvey 2005; Kotz and McDonough 2010; Wright and Rogers 2015). Additionally, cuts to transportation and skills-building services have reduced the ability of working class families to access good-paying jobs.. Thus:

Hypothesis 4.1: The neoliberal state will increase MG income inequality, decrease redistribution, and increase SM income inequality.

I examine aspects of financialization and their relationship with income inequality as well. The first is FIRE employment, which represents the size and power of finance, insurance, and real estate agencies in the labor market. Additionally, it represents the finance industry's power in politics and the economy. FIRE employment is the most commonly used measure of financialization in the literature examining income inequality. FIRE employment is expected to increase income inequality because financial sector wages have been growing at a much faster rate than nonfinancial workers, even after controlling for productivity and human capital characteristics (Tomaskovic-Devey and Lin 2011). Additionally, wealthy individuals, particularly those in finance, have sponsored policies that reduce the tax burden on capital gains and other financial incomes for the wealthy while shifting the tax burden onto the poor. For these reasons, I predict:

Hypothesis 4.2: The percent of workers employed in FIRE industries will increase MG income inequality, decrease redistribution, and increase SM income inequality.

Credit expansion is the second component of financialization examined in this chapter and refers to higher levels of credit and leveraging, or an increase in borrowed assets relative to real assets used to purchase investments, in the private sector issued by banks. This concept represents the extent that credit culture and leveraging dominates the private sector and relates to inequality in several ways, which are outlined in detail in Chapter 2 but are summarized below. Due to deregulation of the banking industry, policies limiting leveraging of banks have been curtailed in the United States and other nations throughout the neoliberal era (Krippner 2011;

Lapavitsas 2013). As a result, banks and other firms have increased the amount of risky investments that have led to windfall profits for firms and wealthy individuals (Bank for International Settlements 2001; Borrio and Lowe 2002; Evans 2003). Though the potential profits related to leveraged investments may be large, there is also risk of major losses as profit variability increases. Wealthy individuals and banks reduce their susceptibility to major losses by securitizing their investments and using derivatives, which cushion losses for investors (Guttman 2008; see Chapters 2 for a more detailed discussion of securities and derivatives and Chapter 5 for a more detailed discussion of how the 1% uses them). As such, I develop the following hypothesis:

Hypothesis 4.3: The share of domestic credit provided to the private sector will increase MG income inequality, decrease redistribution, and increase SM income inequality.

The third and final measure of financialization is financial crises, which represent financial instability in markets caused by increased risk and deregulation. Overall, there are two major theories that predict how financial crises bear upon income inequality and redistribution, which largely differ on the direction of the effect on redistribution. The austerity thesis contends that financial crises increase inequality because there are long-term impacts on the market incomes of the middle class and the poor (Heathcoate, Perri, and Violante 2010). While the wealthy (such as the top 1%) often take a big hit in their income shares during a crisis, their incomes typically recover much more quickly than the middle class and poor in affluent nations (Piketty and Saez 2015; Saez 2015). The austerity thesis contends that financial crises can negatively affect welfare state generosity by reducing resources to fund social programs and diverting resources to bail out failing financial institutions (Harvey 2010). The 2008 financial crisis offers a case in point: state efforts to reboot the economy prioritized policies to rescue “too

big to fail" investment banks rather than policies to rescue the middle class or the poor. Private nonfinancial firms caught up in the collapse imposed mass layoffs or wage freezes in order to cut losses, which further increased MG and SM inequality. The loss of tax revenues from businesses and workers created a fiscal crisis that crippled the ability of the state to extend welfare programs to all who need them, thus decreasing redistribution. Following this logic, the austerity thesis predicts:

Hypothesis 4.4a (Austerity Hypothesis): Financial crises will increase MG income inequality, decrease redistribution, and increase SM income inequality.

The welfare state stabilization thesis agrees with the austerity thesis that financial crises cause increases in MG and SM inequality, but differs about its effect on redistribution. This perspective argues that modern welfare states engage in "automatic stabilization" (see Dolls, Fuest, and Peichl 2012) whereby a severe economic collapse activates existing social support programs to respond to displaced workers and other needy citizens or creates emergency programs to assist them. Supporting this view, Heathcoate, Perri, and Violante (2010) found that low-income households in the U.S. experienced larger losses in earnings relative to high-income households during recessions, but SM inequality did not increase as much as might be expected because of existing state programs. Similarly, Dolls et al. (2012) found that European nations had more redistributive capacity during crises than the U.S., yet not enough to offset the overall positive impact of crises on SM inequality (see also Baird 2014). Thus, the welfare state stabilization thesis predicts:

Hypothesis 4.4b (Welfare Stabilization Hypothesis): Financial crises will increase MG income inequality, increase redistribution, and increase SM income inequality.

To test these hypotheses, I estimate the effects of neoliberalism and financialization on MG inequality, redistribution, and SM inequality in 18 affluent nations from 1981 to 2011 using error correction models (ECMs). To do so, I first estimate single-equation error correction models, which provide coefficients for the instantaneous effects, short-run effects, and the error correction rates. After a brief discussion of the instantaneous and short-run effects, which are not too prominent for these dependent variables, I focus most of the attention in this chapter on the long-run effects. Long-run effects are estimated using the Bewley transformation. In the next two sections of this chapter, I discuss the results of the analyses.

4.3 Instantaneous and Short-Run Effects on Market-Generated Income Inequality, Redistribution, and State-Mediated Income Inequality

Now, I will turn to the results of the analyses examining the instantaneous and short-run effects of neoliberalism and financialization on income inequality in 18 affluent nations. As stated in Chapter 3, ECMs provide the advantage of estimating instantaneous, short-run, and long-run effects. Instantaneous effects represent the effect of x at t on Δy at t. Short-run effects represent the effects of x at $t\text{-}1$ on Δy at t. Long-run effects represent the effect of x on y spread out over time and are derived from the Bewley transformation.

Starting first with the instantaneous effects, FIRE employment increase the rate of change in both MG and SM inequality while it has no effect on redistribution, which supports *Hypothesis 2.1*. As FIRE sector employment grows, inequality increases in the same year because financial sector workers tend to be paid more than nonfinancial workers (Tomaskovic-Devey and Lin 2011; Lin and Tomaskovic-Devey 2013) and because there is increased demand for low-pay and low-skill service work to cater to the needs of the affluent (Moller, Anderson and Nielsen 2009). None of the other variables have significant instantaneous effects. FIRE

employment likely has significant instantaneous effects because it is directly tied to the labor market, which is more immediately connected to the income distribution than the other key variables.

For short-run effects, financial crises are associated with an increase in the rate of change in MG inequality. In other words, income inequality tends to rise in nations in the years affected by financial crises. This particular finding supports both *Hypotheses 4.1a* and *4.1b*, but it does not adjudicate between the austerity and welfare state stabilization hypotheses because they both predict that financial crises increase MG inequality. Additionally, credit expansion is associated with an increase in the rate of change in SM inequality, which provides support for *Hypothesis 3.1*. As private sector credit increases, there are immediate gains for the wealthy. This is because financial institutions and the wealthy use leverage and securities to engage in profitable but risky behaviors with some assurance that any losses will be partially protected (Guttman 2008), which increase SM inequality.

In summary, I find some evidence that each financialization measures is associated with income inequality either through instantaneous and short-run effects during the neoliberal era. While neoliberalism does not have any instantaneous or short-run effects on income inequality, all three measures of financialization increase either MG or SM inequality and are consistent with my hypotheses. None of the key independent variables had instantaneous or short-run impacts on redistribution, however. As I show in the next section, neoliberalism and financialization tend to impact inequality more through long-run processes. While the magnitudes of the long-run effects will differ from the instantaneous or short-run effects, the directions of the significant coefficients will largely corroborate a similar story of how neoliberalism and financialization have shaped income inequality during the neoliberal era.

4.4 Long-Run Effects on Market-Generated Income Inequality

I display the results for ECMs estimating the long-run effects of the covariates on the three dependent variables in Tables 4.1 through 4.6. In Table 4.1, I present the models predicting MG income inequality. For each set of models, I first estimated the ECM and then performed the Bewley transformation to acquire the long-term effects of each independent variable. In models 1 through 4, I display the long-term effects for each key independent variable alone with the controls. Then in model 5, I present the long-term effects for all key independent variables together with controls. This allows me to see how each key independent variable impacts MG inequality alone and net of the other key independent variables.

The relatively sizable error correction rates for MG inequality in models 1 through 5, ranging from -.258 to -.251 indicate that the causal impact of the independent variables tends to be strong and quickly dissipates over time. The error correction rate is the rate at which an economic shock causes the time series trend to correct, or readjust, after being affected by something like an economic crisis in the next year. For example, if you have an error correction rate of -0.256 (which is from model 1 and represents a moderately high value), then 25.6% of the initial shock will adjust after the first year, and an additional 25.6% in the second year of the remainder, and so on. As a result, the effects of the selected variables on MG inequality are relatively deep and short-lasting as compared to a long-lasting hypothetical value of -0.154 for an error correction rate. The R^2 values shown in the tables are from the original ECM models

because the models that utilize Bewley transformations do not produce R^2 values.[7]

Table 4.1: Long-Run Effects of Neoliberalism and Financialization on MG Inequality in 18 Affluent Democracies, 1981-2010 (N=540)[a]

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Business cycle					
Unemployment rate	0.277***	0.254***	0.311***	0.268***	0.375***
	(0.035)	(0.034)	(0.044)	(0.036)	(0.036)
Economic growth	0.016	0.087*	0.091+	0.127**	0.166***
	(0.041)	(0.041)	(0.050)	(0.043)	(0.043)
Labor market structure					
Government employment	0.037	0.055	0.045	0.100*	0.118*
	(0.048)	(0.050)	(0.063)	(0.048)	(0.051)
Union density	0.011	-0.022	0.009	-0.044*	-0.023
	(0.019)	(0.018)	(0.023)	(0.019)	(0.019)
Globalization					
Imports	0.045*	0.026	0.009	0.052**	0.041*
	(0.019)	(0.020)	(0.025)	(0.019)	(0.019)
Inward FDI	0.019***	0.021***	0.017**	0.016**	0.025***
	(0.006)	(0.005)	(0.006)	(0.006)	(0.005)
Neoliberalism					
Neoliberal state	0.488***				0.604***
	(0.136)				(0.139)
Financialization					
FIRE employment		0.170*			0.240**
		(0.077)			(0.081)
Credit expansion			0.012**		0.013***
			(0.004)		(0.003)
Financial crisis				0.307***	0.251***
				(0.032)	(0.032)
Error-correction rate	-0.256***	-0.258***	-0.251***	-0.256***	-0.256***
	(0.039)	(0.040)	(0.038)	(0.038)	(0.039)
Constant	27.884***	29.916***	29.783***	30.927***	23.412***
	(1.161)	(0.902)	(1.001)	(0.597)	(1.412)
R^2	0.198	0.200	0.194	0.205	0.213

*--p <.05, **--p <.01, *** p--<.001, †-- p< .10 (two-tailed tests).

a—Panel-Corrected AR1 Standard Errors in parentheses.

Note: Time trend variables and country dummies are not shown.

First, I will discuss briefly the effects of the controls in models 1 through 5. Unemployment, as one would expect, increases MG inequality in models 1 through 5, most likely due to the fact that unemployment reduces workers' bargaining power and causes wages to decline. Economic growth increases MG inequality in models 2, 4, and 5, and it has a marginally significant positive effect in model 4. This finding suggests that economic growth in the neoliberal era does not lead to shared prosperity but instead to rising incomes for the rich. Government employment, generally, does not impact MG inequality, except in models 4 and 5. After controlling for the key neoliberalism and financialization measures in model 5, government employment is associated with greater MG inequality. While this effect is not particularly robust to different variables being the models, it does suggest that government employment can actually increase inequality of market incomes, possibly due to the presence of high-paid bureaucratic workers. Union density primarily has no significant effects on MG inequality, except in model 4 where it decreases MG inequality as one would expect. This provides some evidence that unions do help reduce inequality, most likely by compressing the income distribution. Consistent with previous research (Alderson and Nielsen 2002), we can see that imports increase MG inequality in models 1, 4, and 5, but these effects are nonsignificant in models 2 and 3. This suggests that the influx of cheaper goods from abroad, as well as the lack of manufacturing goods within one's own nation, tends to weaken the bargaining power of workers and increases income inequality. Additionally, inward FDI is associated with greater MG inequality in all 5 models, which is consistent with previous research (Alderson and Nielsen 2002). As inward FDI increases, it puts downward pressure on native workers' wages as firms compete for the lowest labor costs to attract capital.

Turning to the primary focus of the analysis, the neoliberal state is associated with greater MG income inequality over the long-run in models 1 and 5, which supports *Hypothesis 1.1*. As shown in model 5, a one-unit increase in the neoliberal state index is associated with a .604 unit increase in MG inequality. The three dimensions of financialization also have consistently positive effects on MG inequality over the long run in models 2, 3, 4, and 5. Focusing on model 5, a one-percent increase in FIRE employment is associated with a .240 unit increase in MG inequality, supporting *Hypothesis 2.1*. A one-percent increase in credit as a share of GDP creates a .009 unit long-run increase in MG inequality, supporting *Hypothesis 3.1*. A one-unit increase in the crisis measure is expected to have a .349 unit increase in MG inequality, supporting *Hypotheses 4.1a* and *H4.1b*. This effect, however, does not distinguish between the austerity and welfare state stabilization hypotheses, which will be adjudicated in the analyses of redistribution. Taken as a whole, all three aspects of financialization are detrimental to a more egalitarian distribution of market incomes.

The results of model 5 in Table 4.1 are replicated in Table 4.2 in the form of jackknife models. To estimate the jackknife models, 18 sets of models were run dropping one nation at a time to determine if the results are robust regardless of the nations in the models. The results for the neoliberal state and financial crises variables are robust for all jackknife models. The positive effect of FIRE employment is robust except in the models excluding Belgium and Ireland. Similarly, credit expansion is robust in all models, except those excluding Belgium. On the whole, these results provide strong support for the hypotheses that each key variable in the analysis increases MG inequality. Belgium is an extreme case for three of the four variables, specifically all three financialization variables. While finance and banking are important industries in Belgium, the nation has experienced some economic difficulties throughout the

2000s (Rumney 2016). This is largely due to labor market fragmentation and high levels of public and private debt, which likely explains why Belgium seems to be an influential case in determining the significance of the positive coefficients for FIRE employment and credit expansion. As the headquarters of European Union (EU) and North Atlantic Treaty Organization (NATO), this may make Belgium unique in these analyses, as well. Nonetheless, the results from the jackknife models largely support my hypotheses for the key independent variables.

Table 4.2. Jackknife Models of the Long-Run Effects Predicting Market-Generated Inequality

	Full ECM	**Jackknife Low**		**Jackknife High**		**Discordant**
Variable	Coefficient	Coefficient	Country	Coefficient	Country	**Models[a]**
Neoliberalism						
Neoliberal state	0.604***	0.397***	New	0.846***	Norway	0
	(0.127)	(0.144)	Zealand	(0.152)		
Financialization						
FIRE employment	0.240**	0.091	Belgium	0.407***	Australia	2
	(0.081)	(0.083)		(0.087)		
Credit expansion	0.013***	-0.000	Belgium	0.022***	Netherlands	1
	(0.003)	(0.003)		(0.003)		
Financial crisis	0.251***	0.183***	Netherlands	0.367***	Belgium	0
	(0.032)	(0.032)		(0.034)		
N	540	510		510		

*--p <.05, **--p <.01, *** p--<.001, †-- p< .10 (two-tailed tests).

a—Number of country models with non-significant results from the jackknife analyses (out of a possible 18) at p < .10. "NA" means that the coefficient was not significant in the full model.

Panel-Corrected AR1 Standard Errors in parentheses.

Note: The other controls, time trend variables, and country dummies are not shown.

4.5 Long-Run Effects on Redistribution

I present the long-run effects predicting redistribution in Table 4.3. One should note that the error correction rates for redistribution are lower in magnitude than those for MG inequality, and they range between -.208 and -.202. The lower error correction rates suggest that the long-run effects dissipate more slowly over time than those of MG inequality. First, I turn to the results for the control variables in models 1 through 5. Unemployment, on average, is associated with more redistribution over the long run in all five models. This is not surprising as it tends to cause unemployment insurance and other protections to kick in, thus increasing incomes for bottom earners. Economic growth is associated with more redistribution over the long run; however, this is only significant in models 4 and 5. As the economy grows and income distributions become more unequal, the welfare state responds by reducing some of the inequality. Government employment is associated with more redistribution in models 1 through 4. So while government employment was found to be associated with more MG inequality, more government employment is associated with greater redistribution. Union density does not have a significant long-run effect on redistribution, except in model 2, which suggests that this effect is not very robust. Imports is associated with less redistribution in models 1 through 5. As imports increase, there is additional pressure on the welfare state to cut taxes and transfers, which exacerbates inequality. Finally, inward FDI does not have a significant effect on redistribution over the long run in models 1 through 4, although there is a marginally significant negative effect in model 5. Similarly, there is some evidence that there is competition between by reducing taxes and transfers in order to attract foreign investment.

Table 4.3: Long-Run Effects of Neoliberalism and Financialization on Redistribution in 18 Affluent Democracies, 1981-2010 (N=540)a

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Business cycle					
Unemployment rate	0.202**	0.219***	0.251***	0.303***	0.270***
	(0.062)	(0.063)	(0.068)	(0.065)	(0.065)
Economic growth	0.037	0.03	0.045	0.162*	0.169*
	(0.072)	(0.072)	(0.074)	(0.077)	(0.080)
Labor market structure					
Government employment	0.254**	0.261**	0.264**	0.323***	0.242**
	(0.082)	(0.087)	(0.093)	(0.084)	(0.084)
Union density	0.041	0.058*	0.052	0.034	0.033
	(0.030)	(0.029)	(0.032)	(0.030)	(0.032)
Globalization					
Imports	-0.096*	-0.083*	-0.086*	-0.090*	-0.073+
	(0.038)	(0.039)	(0.041)	(0.038)	(0.039)
Inward FDI	-0.010	-0.010	-0.012	-0.009	-0.020+
	(0.011)	(0.011)	(0.012)	(0.011)	(0.011)
Neoliberalism					
Neoliberal state	-0.542*				-0.493+
	(0.259)				(0.259)
Financialization					
FIRE employment		-0.280*			-0.309*
		(0.123)			(0.134)
Credit expansion			-0.027***		-0.033***
			(0.006)		(0.006)
Financial crisis				0.178**	0.183**
				(0.058)	(0.056)
Error-correction rate	-0.202***	-0.207***	-0.208***	-0.203***	-0.206***
	(0.039)	(0.040)	(0.040)	(0.040)	(0.040)
Constant	14.237***	12.625***	11.449***	11.449***	3.674***
	(2.152)	(1.647)	(1.522)	(1.522)	(1.013)
$\mathbf{R^2}$	0.159	0.160	0.162	0.160	0.166

*--p <.05, **--p <.01, *** p--<.001, †-- p< .10 (two-tailed tests).
a—Panel-Corrected AR1 Standard Errors in parentheses.
Note: Time trend variables and country dummies are not shown.

Turning to neoliberalism, I find that the neoliberal state decreases redistribution in model 1 and has a marginally significant negative effect in model 5, which supports *Hypothesis 1.1*. In model 5, a one-unit change in the neoliberal state measure causes a .493 percent long-run increase in redistribution. Looking at FIRE employment in models 2 and 5, there are negative effects on redistribution, which supports *Hypothesis 2.1*. A one-percent increase in FIRE employment results in a .309 percent decrease in redistribution over the long run in model 5. The second measure of financialization, credit expansion, is associated with less redistribution in models 3 and 5 as expected by *Hypothesis 3.1*. As credit increases by one percent, there is a .033 percent long-run reduction in redistribution in model 5. Finally, financial crises are associated with more redistribution in models 4 and 5, which supports *Hypothesis 4.1b* and fails to support *Hypothesis 4.1a.* Contrary to Harvey's (2010) austerity hypothesis, these findings support the welfare state stabilization hypothesis. Though, it should be noted that the effect of crises in model 5 is weaker and less significant after controlling for other measures of financialization and neoliberalism than it was model 4. This suggests that some of the effect of financial crises on redistribution operates through changes in neoliberal state policies and the other financialization measures, which were likely impacted by the financial crisis itself. A one-unit increase in the crisis measure leads to a .183 percent long-run increase in redistribution in model 5. These particular findings are robust with and without the presence of the neoliberal state variable, which controls for social spending, top marginal tax rates, and government consumption. As the labor market struggles to recover from financial woes, the welfare state "automatically" kicks in to partially supplement the loss of market incomes (Dolls, Fuest, and Peichl 2012). This is done through existing social policy such as unemployment insurance, types of welfare like food assistance, health insurance, and other state social programs which have direct and indirect

benefits for the unemployed and poor. Additionally, as incomes of the middle class and poor decrease, they tend to be taxed at lower rates and receive greater transfers due to progressive taxation policies. While austerity may occur in some nations like Greece, Brazil, and other middle and lower income nations, the level of austerity in affluent nations appears to be lower.

The jackknife models predicting redistribution are presented in Table 4.4. Overall, the jackknife results illustrate that the models predicting redistribution are less robust than those predicting MG inequality. The result for the neoliberal state was only marginally significant in model 5 of Table 4.3; however, it was in the predicted negative direction. Here, we can see that dropping any one of five nations—Ireland, Netherlands, Sweden, the United Kingdom, or the United States—causes the effect of the neoliberal state to become nonsignificant. The effect of FIRE employment becomes nonsignificant when one of seven nations are dropped from the models—Australia, Denmark, Germany, New Zealand, Norway, Sweden, or Switzerland. The effect of credit expansion is the most robust: it only becomes nonsignificant when France is dropped from the models. Finally, the financial crisis variable becomes nonsignificant when Germany, France, or New Zealand are dropped from the models. This relatively large number of discordant models may be related to vastly different redistributional processes not captured by the observed data. As a result, further research on the impacts of neoliberalism on redistribution is warranted.

Table 4.4. Jackknife Models of the Long-Run Effects Predicting Redistribution

	Full ECM	**Jackknife Low**		**Jackknife High**		**Discordant**
Variable	Coefficient	Coefficient	Country	Coefficient	Country	**Models[a]**
Neoliberalism						
Neoliberal state	-0.493†	-0.946***	Belgium	-0.089	Sweden	5
	(0.259)	(0.251)		(0.152)		
Financialization						
FIRE employment	-0.309**	-1.227***	Italy	-0.151	Australia	7
	(0.134)	(0.083)		(0.087)		
Credit expansion	-0.033***	-0.060***	Belgium	-0.010	France	1
	(0.006)	(0.005)		(0.007)		
Financial crisis	0.183***	0.042	France	0.469***	Belgium	4
	(0.056)	(0.057)		(0.055)		
N	540	510		510		

*--p <.05, **--p <.01, *** p--<.001, †-- p< .10 (two-tailed tests).
a—Number of country models with non-significant results from the jackknife analyses (out of a possible 18) at p < .10. "NA" means that the coefficient was not significant in the full model.
Panel-Corrected AR1 Standard Errors in parentheses.
Note: The control variables, time trend variables, and country dummies are not shown.

4.6 Long-Run Effects on State-Mediated Income Inequality

Finally, I present the long-run effects predicting SM income inequality in Table 4.5. Here the error correction rates are appreciably smaller than those for the previous two sets of models, suggesting that the long-run effects for SM inequality dissipate more slowly than those for MG inequality and redistribution. The error correction rates range from -.177 to -.162. Focusing first on the controls, both unemployment and economic growth are related to more SM inequality in models 1 through 5. Again, unemployment increases inequality because it decreases the demand for workers and weakens their bargaining power. Economic growth increases inequality because the affluent tend to benefit more during times of economic prosperity. Government employment is associated with less SM inequality in models 1 through 5, however. While I found that government employment is associated with greater MG inequality, government employment is associated with more redistribution and less SM inequality. This suggests that the redistribution associated with government employment, through pensions and other benefits, overtakes any inequality in market incomes and reduces inequality after taxes and transfers, which is consistent with previous research. Additionally, more government workers could result in a more organized political voice to defend and expand state services that help reduce inequality. Union density is not related to SM inequality in models 2 through 4; however, this effect is surprisingly positive in models 1 and 5. This finding contradicts previous research on unions and inequality, but it is not particularly robust given that the effect comes in and out of significance depending on other variables in the models. However, union density's ability to reduce inequality may act through its ability to put pressure on the welfare state to increase redistribution. Further, countries that are more neoliberal also tend to have much lower unionization rates. This negative correlation may be masking the true relationship between union density and neoliberalism.

Regarding the globalization variables, I find that imports is unexpectedly associated with less SM inequality, especially given the fact that it was associated with more MG inequality and less redistribution in the previous models. This effect remains significant in models 1 through 5.[8] Inward FDI has a positive effect on SM inequality as expected, an effect that is robust in models 1 through 5. Investments from foreign firms puts downward pressure on wages, taxes, and transfers thus causing SM inequality to increase due to competition to attract investors.

[8] This particular finding is likely due to model specification and the variables in the models. Imports is associated with more SM inequality in models that include inflation, immigration, and industrial employment. Additionally, removing the instantaneous effects causes this variable's coefficient to become positive and significant.

Table 4.5: Long-Run Effects of Neoliberalism and Financialization on SM Inequality in 18 Affluent Democracies, 1981-2011 (N=540)a

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Business cycle					
Unemployment rate	0.176***	0.161***	0.175***	0.177***	0.246***
	(0.018)	(0.017)	(0.025)	(0.018)	(0.019)
Economic growth	0.077***	0.144***	0.118***	0.152***	0.153***
	(0.023)	(0.022)	(0.027)	(0.023)	(0.023)
Labor market structure					
Government employment	-0.186***	-0.186***	-0.170***	-0.178***	-0.146***
	(0.031)	(0.030)	(0.040)	(0.031)	(0.030)
Union density	0.033**	0.012	0.021	0.002	0.033***
	(0.011)	(0.010)	(0.014)	(0.011)	(0.010)
Globalization					
Imports	-0.022*	-0.037***	-0.046***	-0.033***	-0.030**
	(0.010)	(0.010)	(0.013)	(0.010)	(0.010)
Inward FDI	0.026***	0.026***	0.024***	0.025***	0.030***
	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)
Neoliberalism					
Neoliberal state	0.524***				0.666***
	(0.070)				(0.069)
Financialization					
FIRE employment		-0.030			0.119*
		(0.048)			(0.048)
Credit expansion			0.023***		0.029***
			(0.002)		(0.002)
Financial crisis				0.139***	0.109***
				(0.015)	(0.015)
Error-correction rate	-0.169***	-0.162***	-0.168***	-0.164***	-0.177***
	(0.033)	(0.032)	(0.032)	(0.033)	(0.032)
Constant	26.669***	30.353***	28.663***	30.199***	22.310***
	(0.678)	(0.626)	(0.714)	(0.468)	(0.797)
$\mathbf{R^2}$	0.117	0.122	0.126	0.117	0.145

*--p <.05, **--p <.01, *** p--<.001, †-- p< .10 (two-tailed tests).
a—Panel-Corrected AR1 Standard Errors in parentheses.
Note: Time trend variables and country dummies are not shown.

With regard to neoliberalism and financialization, all four hypotheses for SM inequality are supported to varying degrees. First, the neoliberal state has a significant, positive effect on SM inequality in models 1 and 5, supporting *Hypothesis 1.1*. In model 5, a one-unit increase in the neoliberal state variable is linked to a .666 unit long-run increase in SM inequality. All three indicators of financialization are associated with greater SM inequality; however, FIRE employment has a less robust effect. In model 2, there is a negative and nonsignificant coefficient for FIRE employment; however, this coefficient becomes positive and significant in model 5 when neoliberalism and the other two financialization measures are included. A one-percent increase in FIRE employment is associated with a .119 unit long-run increase in SM inequality in model 5, which is consistent with *Hypothesis 2.1*. Credit expansion is related to greater SM inequality in models 3 and 5. A one-percent increase in credit provided to businesses in the private sector leads to a .029 unit long-run increase in SM inequality in model 5, which supports *Hypothesis 3.1*. Finally, financial crises increase SM inequality in models 4 and 5. A one-unit increase in the financial crisis variable leads to a .109 unit long-run increase in SM inequality supporting *Hypothesis 4.1a* and *Hypothesis 4.1b*. On balance, the finding that financial crises increase MG and SM inequality but decrease redistribution compliment the welfare state stabilization hypothesis by suggesting that although affluent democracies have the capacity to initiate a countercyclical response to financial crises, they do so within parameters that do not fundamentally alter the basic structure of inequality in capitalist societies. These automatic stabilizers simply buffer some, but not all, of the inequality caused by financial crises.

In Table 4.6, I present the results for the jackknife models predicting SM inequality. Notably, the positive significant results for the neoliberal state, credit expansion, and financial crises variables on SM inequality remain robust across all 18 jackknife models indicating these

findings are very robust. FIRE employment, on the other hand, becomes nonsignificant when either Italy or New Zealand are dropped from the models. Overall, this indicates that the models predicting SM inequality are very robust.

Table 4.6. Jackknife Models of the Long-Run Effects Predicting State-Mediated Inequality

	Full ECM	Jackknife Low		Jackknife High		Discordant
Variable	Coefficient	Coefficient	Country	Coefficient	Country	**Models[a]**
Neoliberalism						
Neoliberal state	0.666***	0.323***	France	1.060***	Norway	0
	(0.069)	(0.067)		(0.081)		
Financialization						
FIRE employment	0.119*	0.039	Italy	0.270***	Australia	2
	(0.048)	(0.045)		(0.047)		
Credit expansion	0.029***	0.018***	Belgium	0.034***	Ireland	0
	(0.003)	(0.002)		(0.002)		
Financial crisis	0.109***	0.068***	Australia	0.183***	Belgium	0
	(0.015)	(0.015)		(0.016)		
N	540	510		510		

*--p <.05, **--p <.01, *** p--<.001, †-- p< .10 (two-tailed tests).
a—Number of country models with non-significant results from the jackknife analyses (out of a possible 18) at p < .10. "NA" means that the coefficient was not significant in the full model.
Panel-Corrected AR1 Standard Errors in parentheses.
Note: The control variables, time trend variables, and country dummies are not shown.

4.7 Discussion and Conclusions

In this chapter, I examined the long-run effects of neoliberalism and financialization—two of the dominant features of the neoliberal SSA—on income inequality in 18 affluent democracies between the years 1981 to 2011. These analyses seek to overcome several limitations of previous research in this field. First, this analysis simultaneously investigates determinants of three interconnected aspects of inequality—market-generated inequality, redistribution, and state-mediated inequality—allowing us to develop a more complete understanding of income inequality in affluent democratic nations. Second, I conceptualize financialization as a multi-dimensional concept and examine the effects of three distinctive dimensions—FIRE employment, credit expansion, and financial crises. Third, I utilize error correction models, the state-of-the-art method for addressing common problems in macroeconomic time series analysis such as unit roots, autocorrelation, and heteroscedasticity (Lin and Tomaskovic-Devey 2013). ECMs additionally allow me to determine whether neoliberalism and financialization impact income inequality through instantaneous, short-run, or long-run processes. Finally, I examine a broad array of 18 affluent capitalist democracies from 1981 to 2011, which eclipses previous studies that were limited to fewer countries or shorter time frames.

Table 4.7 provides an overview of the findings as they relate to my four hypotheses. I find support for 12 of the 12 specific hypotheses that I made regarding neoliberalism and financialization. Notably, while I find support for the general finding that financialization increases income inequality like other scholars (Zalewski and Whalen 2010; Tomaskovic-Devey and Lin 2011; Assa 2012; Arnum and Naples 2013), I show that it does so in a more multi-dimensional and nuanced way than previous research. Also, on balance, the jackknife models

indicate that the findings for the neoliberal state and three financialization variables are relatively robust to the exclusion of individual countries from the models for MG and SM inequality; however, the results for redistribution were much less robust.

Table 4.7: Comparing the Long-Run Effects of Neoliberalism and Financialization on Three Measures of Income Inequality in 18 Affluent Democracies, 1981-2011

Variable	*MG Inequality*	*Redistribution*	*SM Inequality*
Neoliberalism			
Neoliberal State	+	-	+
Financialization			
FIRE Employment	+	-	+
Credit Expansion	+	-	+
Financial Crisis	+	+	+

Note: "+" and "-" represent significant positive and negative findings from Tables 4.1, 4.3, and 4.5; "0" indicates no significant findings from Tables 4.1, 4.3, and 4.5.

Starting at the bottom of the table, I find that financial crises significantly increased MG inequality (Heathcoate et al.., 2010), redistribution, and SM inequality. The first and third findings were in accord with expectations, and the second is consistent with the welfare state stabilization hypothesis (Dolls, Fuest, and Peichl 2012). This suggests that financial crises do increase income inequality; however, welfare state policies that offer security and insurance to workers during crises kick in and reduce some, but not all, of the inequality. While extreme austerity may be common in some less developed nations (Harvey 2010), this does not seem to be the case for affluent nations. Social transfers, particularly generous systems of unemployment insurance in affluent European nations, drive much of the income stabilization process. As seen in the 2007-2009 recession, unemployment insurance is an important, and often underappreciated, component of the welfare state that provides security to workers in times of crisis.

Credit expansion has the most straightforward and easily interpretable effects as it has positive effects on MG and SM inequality but negative effects on redistribution. The circulation of credit from large investment banks to business organizations in the private sector is a primary channel by which inequality is exacerbated in affluent democracies in the era of financialization. It has allowed the wealthy to make speculative moves that can create great wealth for a select few while spreading out risk throughout the economy (Guttman 2008). This process has not been beneficial to average citizens that do not have a stake in financial markets or traders that do not have access to securities. Credit expansion is also associated with less redistribution. Further, credit expansion puts fiscal pressure on the state to reduce taxes and transfers, thus reducing redistribution, as firms lobby for business friendly policies and a neoliberal state to allow them to maximize their profits. Overall, this suggests that credit culture in the private sector contributes to rising inequality.

I find that FIRE employment increases MG inequality (Moller et al.. 2009) and SM inequality. Because financial sector workers are compensated at rates higher than nonfinancial workers (Tomaskovic-Devey and Lin 2011; Lin and Tomaskovic-Devey 2013; Wright and Rogers 2015), this creates inequality in market incomes. Further, as financial industries gain more power and influence in the market, their ability to shape policies in their favor increases. FIRE employment also reduces redistribution; however, the negative effect of FIRE employment on redistribution is questionable since it becomes nonsignificant when any one of seven countries are dropped from the jackknife models. It appears that the ability of FIRE employment to alter the redistributive process of the state is highly variable across the affluent democracies. The ability for financial workers and other wealthy stock traders to lobby for tax and transfer policies in their favor may vary widely across nations. Thus I suggest that further investigation of

the conditions under which FIRE employment either increases or decreases redistribution is a topic for future research.

Finally, I find that the neoliberal state increases MG and SM inequality, as expected, and I find weak support that it reduces redistribution. The negative effect of the neoliberal state variable was marginally significant in model 5 of Table 4.3 and was nonsignificant in 5 of the 18 jackknife models. Overall, this suggests that changes in the neoliberal state impact inequality primarily by generating more unequal market incomes. Its effect on redistribution seems to vary across countries, though. In some cases, the extreme market inequality created in very neoliberal states may force the welfare state to step in and reduce some of that extreme inequality. More often than not, however, the neoliberal state decreases redistribution and exacerbates inequality in the labor market. I encourage more research on this topic in the future.

The second major question addressed in this chapter is whether neoliberalism and financialization impact income inequality and redistribution in the near term or in the long run. The neoliberal state only had long-term effects. Given that this is a policy-based and macroeconomic concept and measure, this is not too surprising. The effects of changes in the neoliberal state and their impacts on redistribution tend to occur gradually over several years. FIRE employment had instantaneous effects on MG and SM inequality, as well as long-run effects on MG inequality, redistribution, and SM inequality. Because FIRE employment is a labor market variable and fluctuations in FIRE employment have immediate implications for employment and income distribution, it is the only variable to have instantaneous effects. Credit expansion had a positive short-run effect on SM inequality, positive long-run effects on MG and SM inequality, and a negative long-run effect on redistribution. The financial crisis variable had a positive short-run effect on MG inequality, positive long-run effects on MG and SM inequality,

and a positive long-run effect on redistribution. Overall, this chapter shows that neoliberalism and financialization tend to impact income inequality and redistribution through long-term rather than short-term processes.

In conclusion, this chapter raises an important point for future research: globalization has no doubt contributed to the rising income inequality in affluent nations; however, scholars should be as concerned with neoliberalism and financialization. I encourage scholars to join the theoretical debates about the impacts of financialization on inequality. As finance becomes a bigger player in the economy, these issues will grow in importance. I also encourage researchers to consider other avenues for measuring neoliberalism and financialization, as well as a broader spectrum of countries and time periods, to more fully understand how these processes affect inequality.

CHAPTER 5: FREE MARKETS, FINANCE, AND FAT CATS: NEOLIBERALISM, FINANCIALIZATION, AND THE TOP 1% SHARE IN 18 AFFLUENT DEMOCRACIES

5.1 Introduction

Many scholars have noted a rise in the share of income and wealth controlled by the rich, particularly in the neoliberal era (Volscho and Kelly 2012; Picketty 2013; Picketty and Saez 2015; Wright and Rogers 2015). While rising incomes for the rich are the general trend, the income shares for the rich have not been rising in all nations. In Figure 5.1, I display trends in the post-tax and post-transfer top 1% share of income for 18 affluent nations between 1981 and 2011. Some nations, like Denmark and the Netherlands, have seen the top 1% share of income remain relatively stable over the 30-year period. Other nations, like Belgium, Finland, France, Italy, Japan, Norway, New Zealand, Sweden, and Switzerland have seen relatively small but steady increases in the top 1% share. Australia, Canada, Germany, Ireland, the United Kingdom, and the United States have seen substantial increases in the top 1% share of income from 1981 to 2011. The rise of top incomes in the United States has been particularly dramatic. Over the past few decades, the income shares of the top 1% in the United States have ballooned to levels not seen since the 1920s (Volscho and Kelly 2012). Despite variation, the top 1% share of income increased by an average of .08% per year during the period of 1981 to 2011. In this chapter, I shift the focus to examine how the incomes of the extremely wealthy are shaped by neoliberalism and financialization in 18 affluent nations from 1981 to 2011, which corresponds to the neoliberal SSA (Kotz and McDonough 2010).

Figure 5.1: Trends in the Top 1% Share of Income in 18 Affluent Nations, 1981-2011

Increasingly, scholars are interested in the factors shaping rising incomes for the rich, and the phenomena of neoliberalism and finance have been increasingly linked to rising top incomes in the United States (Volscho and Kelley 2012) and other affluent nations (Flaherty 2015). Flaherty's (2015) study of the relationship between financialization and the top 1% share examined 14 OECD nations from 1990 to 2010 using a power resources framework that focuses on disparities between labor and capital caused by finance and policy. Conceptually, Flaherty (2015) examines several aspects of financialization. First, he examined the market capitalization of listed firms, which taps into the share volume and prices of companies listed on national stock exchanges. Second he looked at private sector credit, which I examine in this dissertation. Third he examined FIRE gross operating surplus, which represents the production activities and profits of financial firms as a percent of all sectors. And fourth, he looked at financial globalization,

which is a composite measure of assets and liabilities related to portfolio investment, foreign-direct investment, financial derivatives, and other debt instruments. Flaherty's top 1% share data comes from the World Wealth and Income Inequality Database (WWID), previously known as World Top Incomes Database (WTID). Overall, he found that financialization increases the top 1% share, particularly the FIRE gross operating surplus variable; however, financialization's impacts on the top 1% share are largely mediated by the bargaining power of capital relative to labor.

In this chapter, I focus on one primary research question. *How do neoliberalism and financialization impact the top 1% share of income in affluent nations?* I improve upon previous research in several ways. First, I expand Flaherty's sample of nations from 14 to 18 affluent nations with comparable and generalizable characteristics. Second, I examine the entire neoliberal period from 1981 to 2011. Third, despite losing some of the financialization concepts that Flaherty uses due to lack of data availability before 1990, I examine two aspects of financialization not examined by Flaherty: FIRE employment and financial crises. Fourth, I use error correction models (ECMs) with country-fixed effects to address the presence of unit roots and autocorrelation. As discussed in previous chapters, ECMs also have the advantage of being able to determine the timing of the effects of neoliberalism and financialization on the top 1% share. Finally, I use top 1% share data from the SWIID, which are based upon data from the World Wealth and Income Inequality Database (WWID), but improved by Solt (2009; 2013) to address concerns about cross-national comparability (see Chapter 3 for a more detailed discussion of the data).

5.2 Theory and Hypotheses

I will briefly review the theory and hypotheses outlined in Chapter 2 about the relationships between neoliberalism, financialization, and the top 1% share during the neoliberal era. Neoliberalism, particularly policies related to the state, focuses on government spending and investments, decreasing top marginal tax rates, and government transfers through redistribution. These policies largely benefit the rich at the expense of others in society in several ways. First, many nations have seen a decline in government spending and investment (Kotz and McDonough 2010). While the rich can certainly benefit from government spending and investment, the well-being of the middle and working classes tend to be more positively affected because reduced government spending tends to increase unemployment and puts downward pressure on wages. Indeed, the average unemployment rates for France, Italy, and the United Kingdom nearly doubled in the transition from the previous SSA, segmentation, to the end of the neoliberal era.

Second, the decline in top marginal tax rates for the rich in many nations has no doubt increased the incomes of the rich after taxes and transfers. The rich have been able to shift the taxation systems of many nations in their favor because they tend to participate more in the political process by lobbying, giving campaign donations (in nations that allow private donations), and through other means (Boyer 2010; Reich 2016). To better understand top marginal tax rates in affluent nations, it is important to distinguish between nominal and effective tax rates. Nominal tax rates are the tax rates that are the official tax rates that are in the books and are the rates that people are *supposed* to pay. Effective tax rates, on the other hand, are the tax rates that people *actually* pay after accounting for tax breaks, subsidies, and other loopholes.

In the U.S., the nominal top marginal tax rate was approximately 90% in the 1960s under Eisenhower, a Republican president (Wright and Rogers 2015). Top marginal tax rates then steadily decreased under Kennedy, Johnson, and Nixon to 35.5% in 1975. The top marginal tax rates were then dramatically reduced during the Reagan years to 26.7% in 1989. Clinton increased top marginal tax rates up to 39%; however, George W. Bush reduced them to approximately 33% during his tenure in office. Finally, President Obama increased top marginal tax rates to approximately 40%.

While some of these nominal top marginal tax rates seem high, the effective tax rates of the rich are often much lower for a variety of reasons. For example, the wealthy in the United States make most of their income through capital gains (Atkinson, Piketty, and Saez 2010; Wright and Rogers 2015), which is taxed at a much lower rate (around 15% currently). The wealthy can also reduce their tax burden through other subsidies and deductions, such as the deduction for contributing to charities or for paying off mortgages on homes. As a result, the effective income tax rates that the top 1% pay are often much lower than the top marginal tax rates. In response to lower taxes for the rich, the tax burden has largely been placed on the middle and working classes. For example, the United States' income taxes for the median family were fairly constant between 1975 and 1990, hovering between 20 and 25% (Boyer 2015).

While there is year-to-year variation across nations, similar downward trends in taxation for the wealthy occurred in nations like Belgium, Canada, Netherlands, Switzerland and the United Kingdom (Office of Tax Policy Research 2016). The 1980s and 1990s in particular saw very low taxation rates for the wealthy, with top marginal tax rates reaching an extreme low of 11.5% in Switzerland between 1984 and 1996. Top marginal tax rates are highest in Scandinavian nations like Sweden and Finland, currently around 50%.

Third, social programs and public goods that supplement the incomes of the middle and working classes of affluent nations have slowly eroded over the past few decades, which have reduced their income shares relative to the top 1%. This is primarily due to fiscal constraints caused by declining tax revenue, which is tied to shifts in the tax burden from the wealthy to the middle class (Kotz and McDonough 2010). As discussed in Chapters 2 and 4, programs like unemployment insurance, retirement pensions, disability insurance, and educational subsidies have increasingly faced cuts or have been eliminated. For the programs that remain, there is increased pressure from the ideological right to privatize them, which tends to exacerbate market inequalities. Scandinavian countries like Sweden, Norway, and Finland have largely resisted many of these changes, however. All in all, I predict that the historical movement toward neoliberalism in recent decades will result in larger income shares for the rich. For these reasons, I predict that:

Hypothesis 5.1: The neoliberal state will increase the top 1% share.

Moving on financialization, the first concept is FIRE employment, which represents the size and economic and political power of the finance, insurance, and real estate industries. The literature suggests that FIRE employment, particularly in the financial industry, should increase the top 1% share for several reasons. First, financialization extracts rents from nonfinancial workers to disproportionately increase profits for firms and pay for top financial employees (Tomaskovic-Devey and Lin 2011; Lin and Tomaskovic-Devey 2013). Indeed, the income growth for workers in the financial industry outpaced human capital and productivity gains for those same workers thus suggesting that financiers have disproportionately benefitted from economic growth over the past few decades. As revenues have grown rapidly for the financial sector, the incomes of the top 1% in highly financialized nations like the United States are

increasingly skewed by high incomes of CEOs and investment managers in commercial and investment banks, hedge funds, and other financial institutions (Raugh and Kaplan 2010). The United Kingdom, with its financial center being London, faced similar trends in growing wealth among financiers during the late 20th and early 21st centuries (Harvey 2010). While New York City and London have historically been the global centers of financial activity, many other nations have similar financial centers, such as Tokyo in Japan, Amsterdam in the Netherlands, and Paris in France. As financial activity intensifies in these global financial cities, the incomes and power of the top 1% tends to increase relative to everyone else as well (Sassen 2001).

But FIRE employment is not simply a measure of employment: it represents the size and strength of the FIRE sector more generally. FIRE employment (and the compensation derived by FIRE sector workers) correlates with other key financial indicators like financial profits and market concentration in the banking sector (Wright and Rogers 2015), which tend to benefit the wealthy. As the financial sector grows in wages and profits, there is increased proclivity for firms to place primacy of the shareholder conception of the firm over the stakeholder conception. To review from Chapter 2, the shareholder conception of the firm means that management increasingly utilizes short-term planning that focuses on maximizing quarterly stock values and corporate profits instead of increasing the incomes and livelihoods of their employees (Dobbin and Zorn 2005; Krier 2005). As a result, firms increasingly tried to minimize the costs of labor and other expenses in order to maximize profits, which satisfy investors and encourage investments in their stocks. These behaviors were encouraged in the United States and other affluent nations as CEO pay was increasingly tied to stock options instead of long-term market shares, sales, or production value (Tomaskovic-Devey and Lin 2011). This led to ballooning CEO and managerial pay while the inflation-adjusted wages of the average worker remained

stagnant in highly financialized nations like the United States and United Kingdom (Wright and Rogers 2015). Taken together, this suggests that:

Hypothesis 5.2: The percent of workers employed in FIRE industries will increase the top 1% share.

The second measure of financialization is credit expansion. As stated in Chapter 2, credit is a fundamental component of financialization because financial institutions play a vital role in both increasing and directing credit flows. Private sector credit growth, or credit related to the activities of banks and large corporations, tends to benefit the incomes of the wealthy for several reasons. Credit expansion tends to be accompanied by increased leverage, or rising levels of risky investments based on borrowed assets relative to capital reserves, which increases the variability in profits (Lapavitsas 2013). This creates the potential for much higher profits but also greater risk of larger losses—which now involve other people's money.

Leveraging is a risky practice that can result in tidy gains; however, it spreads risk throughout the economy. The way that wealthy individuals and banks use leveraging is well-illustrated by the following example adapted from Wright and Rogers (2015). Suppose there are two wealthy investors with $1,000,000 each in savings. Investor one buys $1,000,000 in stocks savings and then a year later, sells those stocks for $2,000,000. This investor made $1,000,000 in profits, or a 100% return on investment. Investor two, on the other hand, borrowed $900,000 and used $100,000 of his own money to buy $1,000,000 in stocks. When he sold the stocks for $2,000,000 a year later, he paid back the $900,000 loan plus $90,000 in interest. This gives you a profit of $910,000 (i.e., $2,000,000 minus the $900,000 loan and $90,000 interest and his original $100,000 investment), but now it is a 910% profit on his original investment of $100,000. By borrowing money on the original investment, the profit rates increase dramatically

assuming that the asset price goes up in value. If the prices of the investment decline, however, investor 2 would not have the money to pay back his loans and interest accumulation and would have to file for bankruptcy. If too many people use leverage and make bad deals, it can result in a financial crisis. So while increasing leverage and private sector credit can increase windfall profits for the financial sector and wealthy individuals investing in the stock market (Bank for International Settlements 2001; Borrio and Lowe 2002; Evans 2003), they also create potentially disastrous crises if speculative bubbles burst.

Additionally, the wealthy typically insulate themselves from the risk caused by leveraged investments by using derivatives and other securities, which act as insurance for risky investments (Guttman 2008). The middle-class, on the other hand, typically do not have the money to buy securities for their investments, assuming they even own shares of stock, and thus are excluded from their protection. Risk caused by leveraging is often spread out across markets as debt gets packaged, rebundled, and traded among banks, which exposes the general public to the risky, leveraged behaviors of the wealthy. Data for derivatives and other securitized instruments is not widely available for the nations and years examined in this dissertation; however, private sector credit taps into these concepts because leveraging tended to increase with the deregulation of securities and other debt instruments (Guttman 2008). For these reasons:

Hypothesis 5.3: The share of domestic credit provided to the private sector will increase the top 1% share.

While, the theoretical literature suggests that neoliberalism and financialization are largely beneficial to the rich, an overextension of leverage and other risky financial moves can become detrimental to the top 1%. Because leveraging creates an interlocking system of debt, financial crises can occur if markets begin to sour and prices fall. If financial markets get flooded

with too many risky investments and become unstable, then subsequent financial crises can cause the top 1% to temporarily face income losses because so much of their income is tied to capital gains (Atkinson, Piketty, and Saez 2010).[9] Indeed, the income losses of the rich tend to exceed those of the middle class and the poor thus decreasing the top 1% share (Picketty and Saez 2015; Saez 2015). This means that the middle class and poor do face losses; however, the rich are bigger losers in financial crises than the middle class and poor. While the risks associated with financial crises can be mitigated through derivatives and other securities, the top 1% still tends to face losses as derivatives only provide partial insurance for investments. As a result:

Hypothesis 5.4: Financial crises will decrease the top 1% share.

In the next section, I present the error correction models predicting the effects of neoliberalism and financialization on the top 1% share in 18 affluent capitalist democracies. First, I estimate the instantaneous and short-run effects using single-equation error correction models. I then use the Bewley transformation to estimate the long-run effects. In this chapter, I present tables for instantaneous, short-run, and long-run effects because there are a number of significant coefficients for each type of effect because the top 1% share has more annual variation than the Gini indices used in Chapter 4. In Chapter 4, I only presented tables for the long-run effects while briefly discussing the instantaneous and short-run effects. This is because there were very few instantaneous and short-run effects while there were a number of long-run effects. This is not surprising given that the Gini indices are less volatile and tend to have less variation from year to year. Finally, to anticipate the results for the reader, there are stronger

[9] In countries like the United States, the rich tend to recover more quickly from financial losses than the general public (Picketty and Saez 2015; Saez 2015). The ECM analyses of Chapter 5 do not allow me to examine the recovery of top incomes, however.

findings for long-run effects for the top 1% while there are weaker effects for instantaneous and short-run effects. As a result, I present jackknife models for the long-run effects alone.

5.3 Results

In Table 5.1, I present the results for the instantaneous effects of selected variables on the top 1% share in 18 affluent democracies between 1981 and 2011. These results show how a unit change in the independent variables impacts the rate of change in the top 1% share *instantaneously*—that is, during the same year. The error-correction rates are presented at the bottom of the table, and they range between -.332 and -.278. While error correction rates are also shown in Table 5.1, they are most relevant to the long-run effects therefore I will discuss them in greater detail in Table 5.3.

Table 5.1: Instantaneous Effects of Neoliberalism and Financialization on the Top 1% Share in 18 Affluent Democracies, 1981-2011 (N=540)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Business cycle					
Unemployment rate	0.061	0.059	0.057	0.051	0.058
	(0.039)	(0.041)	(0.039)	(0.038)	(0.040)
Economic growth	0.051**	0.059**	0.061**	0.043*	0.043*
	(0.019)	(0.019)	(0.020)	(0.020)	(0.020)
Labor market structure					
Government employment	0.150*	0.156*	0.148*	0.159*	0.174*
	(0.068)	(0.070)	(0.069)	(0.068)	(0.068)
Union density	-0.046	-0.062+	-0.063+	-0.058+	-0.043
	(0.033)	(0.034)	(0.034)	(0.034)	(0.033)
Globalization					
Imports	0.012	0.007	0.007	0.008	0.008
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Inward FDI	0.004	0.004	0.005	0.004	0.004
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Neoliberalism					
Neoliberal State	0.364**				0.374**
	(0.114)				(0.115)
Financialization					
FIRE employment		0.046			0.064
		(0.058)			(0.055)
Credit expansion			0.002		0.002
			(0.002)		(0.002)
Financial crisis				-0.124+	-0.089
				(0.071)	(0.069)
Error-correction rate	-0.309***	-0.285***	-0.280***	-0.278***	-0.332***
	(0.061)	(0.060)	(0.059)	(0.058)	(0.062)
Constant	-2.453**	-0.036	1.843*	1.774**	-6.036***
	(0.881)	(0.699)	(0.914)	(0.603)	(0.947)
$\mathbf{R^2}$	0.226	0.204	0.204	0.212	0.243

*--p <.05, **--p <.01, *** p--<.001, †-- p< .10 (two-tailed tests).

Panel-Corrected AR1 Standard Errors in parentheses.

Note: Time trend variables and country dummies are not shown.

Among the control variables, I find that unemployment, imports, and inward FDI have no effect on the top 1% share in all five models. Economic growth is associated with an increase in the rate of change for the top 1% income shares during the same year which shows that the rich benefit the most when the economy grows and supports the finding from Chapter 4 that economic growth increases income inequality. Somewhat surprisingly, government employment is associated with an increase in the rate of change for the shares of the top 1% in all five models. There are several possible explanations for this finding. One possibility is that the production of transportation and communication infrastructure, as well as other public goods, actually benefits the rich, despite the ideological complaints to the contrary. Alternatively, the effect of government employment is perhaps a result of controlling for a variety of other factors that are correlated with government employment, such as union density, unemployment, and neoliberalism, which may be explaining away the expected negative effect. Union density has a negative and marginally significant effect on the top 1% share in models 2-4; however, it is non-significant in models 1 and 5. This suggests that union density may reduce the top 1% share as one would expect; however, unions appear to affect inequality through their influence (or lack thereof) in shaping the direction of the neoliberal state. In periods of union strength, they put pressure on governments to increase social spending and services, which largely benefit workers and less affluent citizens.

Among the key variables of interest, more neoliberalized states are associated with an instantaneous increase in the rate of change in the top 1% share in models 1 and 5, which supports *Hypothesis 5.1*. For a one-unit increase in the neoliberal state, the top 1% share is expected to increase by .364% during that same year in model 1. Even after adding the financialization variables to the models, the predicted instantaneous effect of the neoliberal state

remains positive and significant in model 5. This suggests that reductions in state size and capacity provide immediate economic benefits to the affluent. As shown in models 2, 3, and 5, FIRE employment and credit expansion do not have immediate impacts on the top 1% share, however. Financial crises have a marginally significant negative effect on the rate of change in the top 1% share in model 4, thus providing some support for *Hypothesis 5.4*. This effect, however, no longer remains significant in model 5 after other key independent variables are included. Thus, the affluent experience an instantaneous drop in their share of income in the years affected by financial crises.

In Table 5.2, I present the short-run effects for the selected variables on the top 1% share. Short-run effects predict how a one-unit change in the value of the independent variable *last* year impacts the change in the top 1% share *this* year, holding all other variables constant. Among the controls, unemployment, imports, and inward FDI have no significant effects on the top 1% share over the short run. Similar to what I found in the instantaneous effects, economic growth increase the rate of change in the top 1% share over the short run. These findings provide additional support that economic growth disproportionately benefits the affluent. As I found in the instantaneous effects, government employment is associated with an increase in the rate of change of the top 1% share of income. This provides further evidence that government employment may help the rich despite ideological views suggesting otherwise. Union density primarily decreases the rate of change in the top 1% share over the short run. In models 1, 3, and 4, it has a marginally significant negative effect, and it has a significant negative effect in model 2, as one would expect. But union density's effect is nonsignificant in model 5. This suggests that unions decrease the top 1% share, but they do so through their ability to limit the impacts of the neoliberal state and financialization.

Table 5.2: Short-Run Effects of Neoliberalism and Financialization on the Top 1% Share in 18 Affluent Democracies, 1981-2011 (N=540)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Business cycle					
Unemployment rate	0.001	-0.003	-0.002	-0.013	-0.004
	(0.016)	(0.015)	(0.016)	(0.016)	(0.017)
Economic growth	0.055*	0.068*	0.073**	0.054*	0.057*
	(0.027)	(0.027)	(0.028)	(0.027)	(0.028)
Labor market structure					
Government employment	0.125*	0.123*	0.113*	0.106*	0.139**
	(0.050)	(0.050)	(0.048)	(0.049)	(0.051)
Union density	-0.022+	-0.031*	-0.024+	-0.023+	-0.018
	(0.013)	(0.013)	(0.012)	(0.013)	(0.013)
Globalization					
Imports	0.010	-0.001	-0.001	0.002	0.008
	(0.012)	(0.013)	(0.013)	(0.013)	(0.012)
Inward FDI	-0.002	-0.002	-0.001	-0.002	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Neoliberalism					
Neoliberal State	0.180+				0.190+
	(0.096)				(0.098)
Financialization					
FIRE employment		0.067			0.091+
		(0.044)			(0.048)
Credit expansion			0.002		0.004**
			(0.001)		(0.002)
Financial crisis				-0.249*	-0.223*
				(0.106)	(0.105)
Error-correction rate	-0.309***	-0.285***	-0.280***	-0.278***	-0.332***
	(0.061)	(0.060)	(0.059)	(0.058)	(0.062)
Constant	-2.453**	-0.036	1.843*	1.774**	-6.036***
	(0.881)	(0.699)	(0.914)	(0.603)	(0.947)
$\mathbf{R^2}$	0.226	0.204	0.204	0.212	0.243

*--p <.05, **--p <.01, *** p--<.001, †-- p< .10 (two-tailed tests).

Panel-Corrected AR1 Standard Errors in parentheses.

Note: Time trend variables and country dummies are not shown.

Among the key independent variables, higher values of the neoliberal state are marginally associated with an increase in the rate of change in the top 1% share in the short run. A one-unit increase in the neoliberal state index is predicted to increase the top 1% share by .180% after one year, holding all other variables constant. This marginally significant effect is relatively robust after controlling for the other key independent variables. This provides additional qualified support for *Hypothesis 5.1*. Among the financialization variables, FIRE employment does not have a significant effect on the top 1% share over the short run in model 2. After accounting for the other key independent variables, it does have a marginally significant positive effect in model 5. This provides some evidence for *Hypothesis 5.2* and suggests that growth in FIRE employment associated with higher income shares for the top 1%. This finding should be viewed with caution given that it is only marginally significant. In model 3, one sees that credit expansion does not have a short-run impact on the top 1% share; however, it does have a significant positive effect after including the other key independent variables in model 5. This finding supports *Hypothesis 5.3.* A one-percent increase in private sector credit as a percent of GDP is predicted to increase the top 1% share by .004%, holding all other variables constant. One should note that credit expansion ranges between 23% and 329% in the descriptive statistics so this variable can have potentially substantial impacts depending on its year-to-year variation. The effect of a financial crises on the top 1% share is robust across models 4 and 5, however. In model 4, financial crises and their aftermaths are predicted to reduce the rate of change in the top 1% share of income by .249% in the following year, holding all other variables constant. This effect is robust even after controlling for the other neoliberalism and financialization variables, and it provides evidence to support *Hypothesis 5.4*.

Finally, I present the long-run effects for the selected variables on the top 1% share in Table 5.3. Among the control variables, unemployment does not have a significant long-run impact on the top 1% share in models 1, 2, 3, and 5; however, it does have a significant negative long-run effect in model 4, which includes the controls and the financial crisis variable. Economic growth, government employment, and imports are all associated with larger shares for the top 1% shares over the long run. As one would predict from other research, union density is associated with smaller top 1% shares over the long run. Finally, inward FDI has a significant negative effect on the top 1% share over the long run and suggests that inward FDI actually hurts the incomes of the rich.

Table 5.3: Long-Run Effects of Neoliberalism and Financialization on the Top 1% Share in 18 Affluent Democracies, 1981-2011 (N=540)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Business cycle					
Unemployment rate	0.003	-0.010	-0.027	-0.048**	-0.013
	(0.016)	(0.015)	(0.024)	(0.016)	(0.017)
Economic growth	0.179***	0.239***	0.184***	0.196***	0.172***
	(0.029)	(0.029)	(0.038)	(0.028)	(0.029)
Labor market structure					
Government employment	0.406***	0.431***	0.385***	0.381***	0.419***
	(0.047)	(0.047)	(0.057)	(0.046)	(0.046)
Union density	-0.070***	-0.110***	-0.084***	-0.081***	-0.054***
	(0.012)	(0.012)	(0.016)	(0.012)	(0.013)
Globalization					
Imports	0.032**	-0.004	-0.012	0.006	0.025*
	(0.012)	(0.013)	(0.016)	(0.013)	(0.012)
Inward FDI	-0.007***	-0.006***	-0.004+	-0.006***	-0.004*
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Neoliberalism					
Neoliberal State	0.582***				0.573***
	(0.091)				(0.092)
Financialization					
FIRE employment		0.236***			0.273***
		(0.042)			(0.046)
Credit expansion			0.006**		0.013***
			(0.002)		(0.002)
Financial crisis				-0.894***	-0.672***
				(0.124)	(0.119)
Error-correction rate	-0.309***	-0.285***	-0.280***	-0.278***	-0.332***
	(0.061)	(0.060)	(0.059)	(0.058)	(0.062)
Constant	-2.453**	-0.036	1.843*	1.774**	-6.036***
	(0.881)	(0.699)	(0.914)	(0.603)	(0.947)
$\mathbf{R^2}$	0.226	0.204	0.204	0.212	0.243

*--p <.05, **--p <.01, *** p--<.001, †-- p< .10 (two-tailed tests).
Panel-Corrected AR1 Standard Errors in parentheses.
Note: Time trend variables and country dummies are not shown.

Among the key independent variables, the neoliberal state significantly increases the top 1% share over the long run, thus finding support for *Hypothesis 5.1*. In model 1, a one-unit increase in the neoliberal state index is predicted to increase the top 1% by .582% over the long run, holding the control variables constant. This finding is robust after controlling for the other key independent variables in model 5.

The three measures of financialization also have significant impacts on the top 1% share over the long run. Higher levels of FIRE employment are associated with an increase in the top 1% share in models 2 and 5, which supports *Hypothesis 5.2*. In model 2, one can see that a 1% increase in FIRE employment increases the top 1% share by .236%, holding the control variables constant. As finance, insurance, and real estate sectors grow in employment size and gain more market power and political clout, the wealthy tend to do better. Credit expansion is positively associated with the top 1% share over the long run in models 3 and 5, which supports *Hypothesis 5.3*. A 1% increase in private sector credit relative to GDP is associated with an increase in the top 1% by .006% over the long run in model 3. As banks and large private enterprises increase their credit and leverage, incomes of the rich increase as debt-fueled activities lead to potentially lucrative profits. Finally, financial crises are associated with lower top 1% shares over the long run in models 4 and 5, which supports *Hypothesis 5.4*. For a one-unit increase in the financial crises variable, the top 1% share decreases by .894% in model 4. So while credit expansion and leveraging can increase the incomes for the top 1%, the rich can face income loss if the amount of risky investments in the economy reach unstable levels thus resulting in a financial crisis.

The final things to note are the error correction rates at the bottom of the table, which vary between -0.332 and -0.278 in models 1 through 5. These are the same error-correction rates from Tables 5.1 and 5.2 because error-correction rates are estimated in the instantaneous and

short-run effect ECM models. However, they are most relevant to the long-run effects because they reveal how quickly long-run effects impact the top 1% share. To remind the reader, the error correction rate is the rate at which an economic shock causes the time series trend to correct, or readjust, after being affected by a covariate like an economic crisis in the next year. For example, if one has an error correction rate of -0.332 (which occurred in model 5 in Table 5.1 and is a relatively high value), then 33.2% of the initial shock will adjust after the first year, then 33.2% of what remains in the second year, then 33.2% of what remains in the third year, and so on. As a result, the effects of the covariates in the instantaneous model are relatively short-lived and dissipate quickly. In comparison to those in Chapter 4, which varied between -.258 and -1.62, economic shocks create shorter and deeper impacts to the top 1% share than they do MG inequality, redistribution, or SM inequality.

Finally, I ran jackknife models of the long-run effects as a robustness check of the findings. I only focus on the long-run effects because they had the most significant findings and are most relevant to the theory. I estimated 18 sets of jackknife models by dropping one nation at a time from each set of models to determine if a particular nation is driving the findings. I then present the high and low values of the coefficients in the table. Additionally, I present the number of models that were discordant, defined as those that were nonsignificant or had coefficients in the opposite direction. I use model 5 from table 5.3 ECM model as the reference point.

In Table 5.4, I present the results for the jackknife models of the long-run effects for neoliberalism and financialization predicting the top 1% share as a robustness check of the findings. Overall, the results for the long-run effects for neoliberalism and financialization are very robust in all of the jackknife models. For all four variables, there is not a single country that

when dropped causes the coefficients to become nonsignificant, thus providing strong evidence these results are consistent across all countries in the models. The coefficients for the neoliberal state range from .193 for the jackknife model dropping New Zealand and .663 for the model dropping Finland showing that neoliberalism is good for the rich over the long run. For FIRE employment, the coefficients range between .211 for the jackknife models that drop New Zealand and .304 for the models that drop Germany. The regression coefficients for credit expansion range between .007 for the model dropping the United States and .016 for the model dropping Germany. Finally, the coefficients for financial crises range between -.993 for the model dropping New Zealand and -.353 for the model dropping the United States. So while there are variations in the coefficients for the jackknife models depending on which country is dropped, the coefficients for the key variables are consistently significant throughout all models.

Table 5.4. Jackknife Models of The Long-Run Effects Predicting the Top 1% Share

	Full ECM	**Jackknife Low**		**Jackknife High**		**Discordant**
Variable	Coefficient	Coefficient	Country	Coefficient	Country	**Models[a]**
Neoliberalism						
Neoliberal State	0.573***	0.193*	New	0.663***	Finland	0
	(0.092)	(0.096)	Zealand	(0.108)		
Financialization						
FIRE Employment	0.273***	0.211***	New	0.304***	Germany	0
	(0.046)	(0.044)	Zealand	(0.048)		
Credit Expansion	0.013***	0.007***	United	0.016***	Germany	0
	(0.002)	(0.001)	States	(0.002)		
Financial Crisis	-0.672***	-0.993***	New	-0.356***	United	0
	(0.119)	(0.133)	Zealand	(0.116)	States	
N	540	510		510		

*--p <.05, **--p <.01, *** p--<.001, †-- p< .10 (two-tailed tests).
a—Number of country models with non-significant results from the jackknife analyses (out of a possible 18) at p < .10. "NA" means that the coefficient was not significant in the full model.
Panel-Corrected AR1 Standard Errors in parentheses.
Note: The control variables, time trend variables, and country dummies are not shown.

5.4 Discussion and Conclusion

While Chapter 4 showed us how neoliberalism and financialization impacts income inequality and redistribution, Chapter 5 focuses on how these factors affect the top 1%, or the economic elite of nations, during the neoliberal era. This chapter examines the research questions: *How does neoliberalism and financialization impact the top 1% share of income in affluent nations?* In Table 5.5, I summarize the results from the analyses in Tables 5.1 to 5.4. Like Volscho and Kelley (2012) and Flaherty (2015), I find support that neoliberal policies and financialization, two of the dominant trends of the neoliberal SSA, have contributed to rising incomes for the top 1%. There are several new insights provided by the analyses. Below, I discuss the main contributions of this chapter to the literature on top incomes.

Table 5.5: Comparing the Effects of Neoliberalism and Financialization on the Top 1% Share of Income in 18 Affluent Democracies, 1981-2011

Variable	*Instantaneous Effects*	*Short-Run Effects*	*Long-Run Effects*
Neoliberalism			
Neoliberal State	+	+	+
Financialization			
FIRE Employment	0	+	+
Credit Expansion	0	+	+
Financial Crisis	0	-	-

Note: "+" and "-" represent significant positive and negative findings from Tables 5.1, 5.2, and 5.3; "0" indicates no significant findings from Tables 5.1, 5.2, and 5.3.

First, I find that the neoliberal state increases the top 1% through instantaneous, short-run, and long-run processes. Thus, neoliberal policies provide immediate increases to top incomes, as well as more long-term benefits. In other words, neoliberal countries enhance the bank accounts of the rich in a multi-faceted way, highlighting the benefits of error correction

models. As the movement towards neoliberalism seems to be the trend in many affluent nations, one would expect that the economic power of the rich will also increase. Others, like Boyer (2010) and Reich (2016), have warned of the increasing political power that elites gain as economic inequality increases, which allow them to promote even more neoliberal policies, such as reduced top marginal tax rates and the provision of less public goods and services, to further entrench their wealth. These trends can create a feedback loop as increased economic capital leads to increased political capital that can further allow the rich to set the rules of the game in their favor. Ultimately, this process can threaten democracy as we know it as democratic societies are subverted into plutocracies. For those concerned with rising inequality and the corruption of politics by the wealthy, a movement away from neoliberal policies is likely necessary.

Second, FIRE employment is associated with higher top 1% shares in the short-run and long-run. While FIRE employment had an instantaneous effect on MG inequality in Chapter 4, no instantaneous effect is present for the top 1% share. This signals that FIRE employment increases top incomes less by changing the labor market composition of national economies and more as being representative of the economic and political power of the FIRE sector, exemplified by the shareholder conception of the firm (Dobbin and Zorn 2005; Krier 2005). As finance becomes more influential in shaping profits of national economies, one can expect that firms will increasingly value stock prices over the livelihood of stakeholders, like workers. If unchecked, one can expect that the incomes of the rich will continue to blossom.

I also find that credit expansion contributes to economic inequality by increasing the incomes of the top 1% over the short run and long run. As the private sector relies more on credit and leveraging, the rich tend to capitalize on the climate of profit variability and speculative

bubbles induced by these processes (Bank for International Settlements 2001; Borrio and Lowe 2002; Evans 2003). While speculation can increase profits due to windfall profits, it can also lead to major losses for the wealthy. Through derivatives and other securities, the wealthy hedge their bets and provide insurance to offset potential losses (Guttman 2008). The deregulation of securities markets thus incentivizes the rich to increasingly use leverage as a tool of capital accumulation. While the wealthy can insure some of their losses through securities, the middle class typically lacks access to those financial instruments, which contributes to rising incomes for the wealthy relative to everyone else.

Credit-fueled activities come with some risk for the rich, however. If speculative bubbles burst and create a financial crisis like a stock market crash, the rich see their incomes decrease over the short run and the long run. The short-run effect means that the rich take a hit following the years affected by financial crisis. The error correction rates and the long-run effects illustrate that the rich continue to take small but significant reductions in their income shares for several years following a crisis, as well. This occurs because the incomes of the rich are increasingly tied to capital gains and the stock market during the neoliberal era (Atkinson, Piketty, and Saez 2010). While the recoveries of the incomes of the wealthy tend to be quick during financial crises in the United States (Picketty and Saez 2015; Saez 2015), the incomes of the rich tend to return to normal more slowly net of economic growth and the other measures controlled for in this analysis. The recoveries that the rich see after a crisis are likely connected to economic growth increasing the incomes of the top 1% through instantaneous, short-run, and long-run effects in Tables 5.1, 5.2, and 5.3.

The findings in this chapter raise an interesting policy issue. As it stands, neoliberal policies and the deregulation of finance have allowed the rich in some nations to see their

incomes rise to heights not seen in decades. Those same policies, such as relaxed restrictions on credit and leveraging resulting in potentially lucrative speculative bubbles and windfall profits, can actually temporarily hurt the incomes of the rich when the system comes tumbling down in financial crisis. Policy-makers need to think about increased regulation of financial activities if they want to curtail the economic and political power of the financial elite. At the moment, the potential gains of the rich through risky and speculative activities such as leveraging far outweigh the potential losses caused by financial crises. Additionally, derivatives and other securities allow the wealthy to hedge their losses and provides some insurance for them. Even when losses occur, economic growth (as I show in this chapter), as well as the recoveries from recessions, tend to disproportionately benefit the affluent. As a result, it is not surprising that speculation and risky activities that threaten the economies of affluent nations continue to occur even so shortly after many countries have come out of the greatest recession since the 1920s. While some nations have passed laws to increase regulation over finance, such as the Dodd-Frank Bill in the United States, the Financial Services Act of 2012 in the United Kingdom, and a series of financial regulation laws passed in Germany, these laws have been slowly eroded as restrictions on certain types of financial activities have gradually retrenched. Others argue that they did not go far enough in the first place. This has many wondering not only if we will be moving into a new Gilded Age when there is so much difference between the fate of the rich and the rest of the population, but also if we may be recklessly triggering future financial crises that could have even more devastating effects on the global economy than the one of 2007 to 2009. Given that the dominant SSA in affluent nations has not fundamentally changed since the Great Recession and that the long-term repercussions to the rich do not yet outweigh their downsides, future crises could become commonplace.

In conclusion, this chapter explored some of the main factors driving income gains for the top 1% during the neoliberal era. In summary, much like Volscho and Kelly (2012) and Flaherty (2015), I find that neoliberalism and financialization, two of the dominant modes of accumulation in the neoliberal SSA, increase the income shares for the top 1%. Unlike these two previous studies, I show that FIRE employment and financial crises, two relatively unexamined factors, also shape incomes for the rich. Additionally, I show that these effects occur through a combination of instantaneous, short-run and long-run processes, which can be masked in other types of analyses that do not utilize ECMs. In Chapter 6, I explore who is losing out to the rich during the neoliberal era as a result of neoliberalism and financialization. Is income inequality being driven primarily by upper-tail inequality, lower-tail inequality, or a combination or both? That is, are the incomes of the rich outpacing those of the middle class and the poor? Or are the incomes of the middle class, although stagnant or even in decline in many affluent countries, still outpacing the incomes of an increasingly destitute poor, thus increasing lower-tail inequality? These findings will help to create a clearer picture about how the income distribution is changing during the neoliberal era and why.

CHAPTER 6: RISING INCOMES FOR THE RICH AT THE EXPENSE OF WHOM? NEOLIBERALISM, FINANCIALIZATION, AND UPPER-TAIL, LOWER-TAIL, AND TOP-BOTTOM INCOME INEQUALITY

6.1 Introduction

In many affluent nations, the rich have become richer while the poor and the middle class have been increasingly left behind (Volscho and Kelley 2012; Flaherty 2015; Wright and Rogers 2015; Picketty and Saez 2015). In this chapter, I explore how neoliberalism and financialization have impacted different parts of the income distribution using data from the Luxembourg Income Study. Chapter 4 established that neoliberalism and financialization increase income inequality by primarily increasing variation in market incomes and reducing redistribution of income through taxes and transfers, which leads to more inequality in the disposable incomes that many families in affluent nations receive. Chapter 5 established that the top 1% are big winners due to neoliberalism and financialization; however, it is unclear who is losing out to the rich as a result of neoliberalism and financialization. To date there have been no comparative studies using a wide range of affluent countries that have examined how neoliberalism and financialization impact different parts of the income distribution other than the top 1% share (Volscho and Kelly 2012; Flaherty 2015; see Wallace, Gauchat, and Fullerton 2012 for a study of economic globalization and upper-tail and lower-tail inequality in U.S. metropolitan areas). This chapter fills this gap in the literature by examining three parts of the income distribution: a) *upper-tail inequality*, which is measured as the 90-50 income ratio; b) *lower-tail inequality*, which is measured as the 50-10 income ratio; and c) *top-bottom inequality*, which is measured as the 90-10 income ratio.

While the Gini index, the most popular and serviceable measure of income inequality, is excellent for describing what is going on in the middle of the income distribution, it is not very effective at capturing changes in the tails of the distribution (Atkinson 1970; Volscho and Fullerton 2005:1328). In an effort to more fully capture the dynamics of the income distribution, researchers are increasingly embracing different measures of income inequality as a means to determine what is happening in different parts of the distribution. I explore three of these measures in this chapter of the dissertation. Upper-tail inequality represents inequality between the very affluent, measured as the 90th income percentile, and the median worker, measured as the 50th percentile. The 50th percentile serves as an approximation of middle class income. Lower-tail inequality represents inequality between the median worker and the poor, measured as the 10th percentile.

It is important to distinguish the differences between the top 1% and top 10%, or the 90th percentile, of the income distribution. In his 2013 documentary film *Inequality for All*, Robert Reich effectively captures this distinction in his discussion of the occupations and income sources of different parts of the income distribution. The top 1% represent CEOs, top managers, financiers, athletes, and pop culture icons and tend to acquire most of their income through capital gains. The 90th percentile, or the top 10%, also includes professionals such as doctors, lawyers, and dentists, as well as managers in small and large firms. While some of their income comes from capital gains, they are much less reliant on capital gains and tend to make most of their money from salaries and bonuses.

The differences in occupations and income sources for the 50th and 10th percentiles relative to the 90th percentile are more dramatic. The 50th percentile, or the median worker, represents the middle class (Wright and Rogers 2015). These households tend to hold white

collar jobs that require a college degree. In nations where unions are strong, the 50th percentile may also be in blue collar manufacturing jobs. The 10th percentile represents the poor. These individuals may work in jobs with low-skill requirements and low pay and may depend on government assistance to make ends meet. By examining the three parts of the income distribution, we gain a more comprehensive view of what parts of the income distribution are impacted by changes in inequality.

In the United States, upper- and lower-tail inequality increased simultaneously during the early 1980s (Neckerman and Torche 2007). By 1987, lower-tail inequality slowed and contracted slightly during the 1990s while upper-tail inequality continued to rise (Atkinson 2003; Blau and Kahn 2002; Mishel, Bernstein, and Allegretto 2005). Previous research has shown that the rise of lower-tail inequality during the 1980s and its stalling in the 1990s were tied to changes in the minimum wage adjusted for inflation (Card and Dinardo 2002; Lee 1999; Lemieux 2006). Factors related to rising upper-tail inequality in the United States include the decline of union membership (Card et al 2004), the shift of employment from manufacturing to services, deregulation in many industries, a rise in contingent labor (Berhardt et al 2001; Fligstein and Shin 2004; and Morgan and Cha 2007), economic globalization (Wallace, Gauchat and Fullerton 2011), and the rise of shareholder value over stakeholder value, which is a component of financialization (Fligstein and Shin 2004). Other components of neoliberalism and financialization have been understudied; in addition, there is no current cross-national research examining the impacts of neoliberalism and financialization on upper- and lower-tail inequality.

While upper-tail inequality increased in many nations during the neoliberal era, there is variation across countries. In Figure 6.1, trends in upper-tail inequality are presented. There are three important things to note from this figure. First, as discussed in Chapter 3, there are

relatively few data points in these scatterplots due to the small sample size, and there are different numbers of observations by nation due to the unbalanced panel design. Second, there are dramatic differences in the levels of inequality by nation. For example, countries like the United States, United Kingdom, and Australia have relatively high levels of upper-tail inequality. Countries like France, Germany, and Canada are in the middle range. Finally, nations like Sweden, Denmark, and Norway had relatively low levels of upper-tail inequality. Third, the small number of data points and the erratic pattern of years represented within make it difficult to offer a conclusive statement about time trends within countries. Among the 16 nations, Australia, Austria, Belgium, Canada, Finland, Germany, Sweden, the United Kingdom, and the United States all experienced upward trends in upper-tail inequality. Other nations, like Denmark, France, and Netherlands had relatively stable levels of upper-tail inequality during the period. Italy ended the period with approximately the same level of upper-tail inequality as when it began despite fluctuation in the intervening years. Ireland and Switzerland saw decreasing levels of upper-tail inequality. On the whole, much of the variation in upper-tail inequality is between nations rather than within nations. In many ways, this particular finding suggests that it is important to account for country-level differences in the estimation of models for upper-tail inequality. Additionally, the very affluent have left the median worker behind in many affluent nations; however, there was fluctuation between nations. Finally, on average, there appears to be a positive curvilinear relationship of upper-tail inequality over time.

Figure 6.1: Trends in the Upper-Tail Inequality in 16 Affluent Nations, 1981-2011

There is a different pattern for lower-tail inequality in the 16 nations from 1981 to 2011, which is presented in Figure 6.2. Again, it is important to note both the between country and within country variation. First, there is greater between country variation in lower-tail inequality compared to upper-tail inequality. The United States had by far the most lower-tail inequality over the period followed by Canada and Australia. Italy, Ireland, and the United Kingdom were in the middle range. The rest of the nations tended to have lower values, with Sweden, Netherlands, and Finland having the lowest values. Lower-tail inequality actually decreased in the United States from 1981 to 2011 partially due to increases in the minimum wage, which have increased the incomes for those at the bottom of the income distribution (Neckerman and Torche 2007). Despite decreasing lower-tail inequality, the United States still had the highest lower-tail inequality of the neoliberal era. Several other nations, like Denmark and France, also saw decreasing lower-tail inequality over the period. Nations like Australia, Canada, Netherlands,

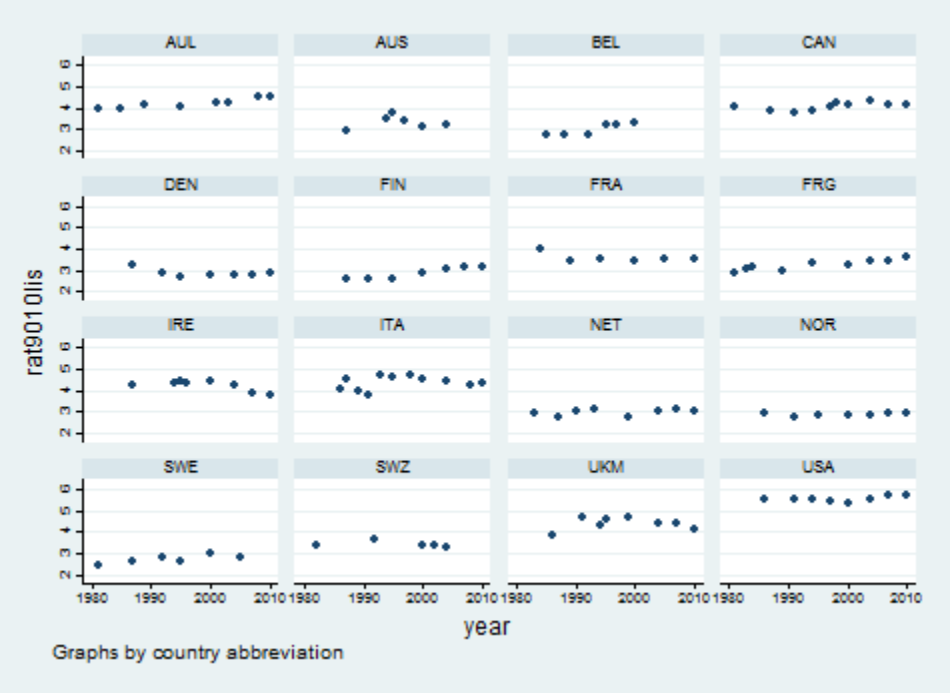
Norway, Sweden, and Switzerland saw lower-tail inequality stay relatively stable over the period. Other nations like Austria, Ireland, and the United Kingdom experienced rising lower-tail inequality leading up to the mid-1990s and decreasing inequality afterwards. Finally, nations like Finland, Italy, and Germany saw rising lower-tail inequality during the neoliberal era. While upper-tail inequality may have been driving most of the inequality in affluent nations during the 1990s onward, the trends of lower-tail inequality show that the gap between the median worker and poor followed very different patterns across nations. Overall, there appears to be a positive curvilinear pattern in these data; however, this pattern varies by country.

Figure 6.2: Trends in the Lower-Tail Inequality in 16 Affluent Nations, 1981-2011

Finally, I present the trends for top-bottom inequality, or the income ratios between the 90th and 10th percentiles, in Figure 6.3. Again, it is important to notice the levels and trends in these data. First, the United States has the most top-bottom inequality followed by Australia, the United

Kingdom, Canada, and Ireland. Most of the other countries fall into the middle range, except Sweden, Denmark, Netherlands, Norway, and Finland, which have relatively low values. Second, there is variation in the trends of these nations. Top-bottom inequality increased in Australia, Belgium, Finland, Germany, Sweden, the United Kingdom, and the United States. Top-bottom inequality stayed level in several countries, like Austria, Canada, Italy, Netherlands, Norway, and Switzerland, despite fluctuations. There was a decreasing gap between the very affluent and the poor in Denmark, France, and Ireland. While the neoliberal era is often characterized as having rising inequality between the very affluent and the poor in affluent nations, this generalization is only true for some nations. For 9 of the 16 nations in this sample, this characterization is misleading. Much like upper- and lower-tail inequality, there appears to be a slight curvilinear relationship between top-bottom inequality and time.

Figure 6.3: Trends in the Top-Bottom Inequality in 16 Affluent Nations, 1981-2011



Beyond fluctuations in the business cycle, labor market transformations, and globalization, this chapter explores the following research question: *How have neoliberalism and financialization contributed to the variation in upper-tail, lower-tail, and top-bottom inequality in 16 affluent nations from 1981 to 2011?* While Chapter 5 established that neoliberalism and two of the three components of financialization—FIRE employment and credit expansion—increase the incomes for big winners in the income distribution sweepstakes, the top 1%, this chapter explores the incomes of the losers in this scenario. As discussed previously, the top 1% and the 90th percentile are not exactly the same group (although of course the top 10% *includes* the top 1%): they are distinguished by their occupations and sources of income. Instead, this chapter examines the interconnections of the incomes for the 90th percentile, or the very affluent, the 50th and the 10th percentiles by examining three questions: First, has neoliberalism and financialization contributed to upper-tail inequality by increasing incomes for the very affluent and undercutting wages for workers in the middle of the income distribution in an effort to cut labor costs and maximize shareholder value (Tomaskovic-Devey and Lin 2011)? Second, has neoliberalism and financialization caused the poor to fall behind the middle class as low-wage service jobs increase as a proportion of total employment in order to cater to the needs of the financial elite (Moller et al. 2009) and social services and programs that supplement the incomes of the poor are undercut (Kotz and McDonough 2010)? And third, have neoliberalism and financialization contributed to top-bottom inequality by increasing incomes for those at the top while disproportionately reducing incomes for the poor? It is important to note that these questions are not mutually exclusive.

In the next section, I describe the theoretical literature and hypotheses linking neoliberalism and financialization to upper-tail, lower-tail, and top-bottom income inequality. I

then use data from the Luxembourg Income Study and CWS to empirically examine these relationships.

6.2 Theory and Hypotheses

While there is a dearth of empirical research relating the processes of neoliberalism and financialization to upper-tail, lower-tail, and top-bottom inequality, there is substantial theoretical and historical work that is useful for developing hypotheses about these relationships. Neoliberalism, particularly the neoliberal state, can impact upper-tail, lower-tail, and top-bottom inequality in a variety of ways. A key component of neoliberalism is reduced taxes, particularly for the affluent and rich (Kotz and McDonough 2010), which benefits the 90th income percentile's incomes after taxes. Additionally, the reduction of government spending and investment can reduce the incomes for the middle class and the poor after taxes and transfers. Government employment and investment in research provides many middle class families stable, middle-wage incomes that might not be provided by the free market due to underutilized demand (Volscho and Fullerton 2005). Finally, the reduction of government spending, public goods, and social services can have devastating impacts on the incomes of the poor (Wright and Rogers 2015). While the 10th percentile does acquire some of its income from wage labor, many households at this income level also rely on government programs to help make ends meet and to improve the quality of their lives. In the absence of these programs, their incomes will also decrease, particularly in nations with low minimum wages. For these reasons, I predict that:

Hypothesis 6.1: The neoliberal state will increase upper-tail inequality and top-bottom inequality. It is unclear how it will impact lower-tail inequality.

FIRE employment is the first component of financialization and represents both the relative size of employment in finance, insurance, and real estate industries, as well as more generally the economic and political power of finance. There are a variety of ways that the

growth of FIRE employment can impact upper-tail, lower-tail, and top-bottom inequality. First, FIRE employment can boost the incomes of the 90th income percentile in several ways. FIRE employment has spurred the growth in financial incomes which have vastly exceeded income growth for nonfinancial workers, even after controlling for productivity and human capital (Tomaskovic-Devey and Lin 2011). Outside of the financial sector, financial managers in nonfinancial firms have also experienced disproportionate wage growth. Additionally, managers' incomes are increasingly tied to stock performance, which incentivizes management to focus on maximizing shareholder value (Fligstein and Shin 2007).

Second, FIRE employment and the growth of finance more generally can reduce the 50th and 10th income percentiles by putting downward pressure on labor's share of income. As finance becomes more influential in shaping the economy and shareholder value becomes a larger priority for firms, there is increased pressure to reduce labor costs, which can include management measures to reduce or eliminate the influence of unions in wage determination (Tomaskovic-Devey and Lin 2011). This undercuts wages for workers in the middle of the income distribution. Additionally, the shareholder value conception of the firm incentivizes management to use profits to reinvest in the stock market instead of investing in workers and productive infrastructure. The incomes of the 10th percentile may be particularly vulnerable because individuals at this income level tend to have less education, skill, and bargaining power: thus their compensation packages tend to be more elastic as management can easily find replacements if these workers demand higher compensation. Further, as the financial sector grows in relative size, there is increased demand for low-wage, low-skill work to cater to the needs of the elite, which increases the proportion of individuals in the bottom of the income distribution (Moller et al 2009; Sassen 2001). All in all, I predict that:

Hypothesis 6.2: The percent of workers employed in FIRE industries will increase upper-tail inequality and top-bottom inequality. It is unclear how it will impact lower-tail inequality.

The second component of financialization is credit expansion in the private sector. To remind the reader, credit expansion taps into the capacity of the financial sector to leverage their investments, that is, utilize other people's money as a higher percentage of their investment portfolios. As discussed in Chapters 2 and 5, private sector credit expansion and leveraging primarily benefit the very affluent as they are afforded opportunities to boost their incomes and profits for corporations through speculation (Lapavitsas 2013). Leveraging and speculation can lead to tidy profits that benefit the incomes of the wealthy; however, they can lead to major losses if prices fall. The wealthy can hedge their risky investments by using derivatives and other forms of securities to provide partial insurance if a deal goes bad (Guttman 2008); however, the poor and middle class rarely have the capital to take advantage of these opportunities. While the top 1% are more heavily dependent upon capital gains and investments for their income (Atkinson, Piketty, and Saez 2010; Wright and Rogers 2015), the 90th percentile tends to be more reliant on salaries and bonuses. As a result, private sector credit may not benefit the 90th percentile as much as it does the top 1%. Further, as private sector credit increases, there may be added pressure to decrease wages for the middle class and the poor in an effort to minimize labor costs and maximize profits and shareholder value. Therefore, since private sector credit expansion mainly serves the interests of the wealthy I offer the following hypothesis:

Hypothesis 6.3: The share of domestic credit provided to the private sector will increase upper-tail inequality and top-bottom inequality. It is unclear how it will impact lower-tail inequality.

The final component of financialization is financial crises. It is unclear from the literature how financial crises will impact upper-tail, lower-tail, and top-bottom inequality. The top 1% share takes a major hit in incomes relative to everyone else during a financial crises as their incomes are dependent on capital gains (Atkinson, Piketty, and Saez 2010; Wright and Rogers 2015), which was confirmed Chapter 5 of this dissertation. The 90th income percentile as a whole will tend to have a higher percentage of their income derived from capital gains than the rest of the income distribution income. Despite this, they are much more reliant on salaries and bonuses than the top 1% alone. So while the 90th percentile may receive pay cuts or job losses due to financial crises, the losses that they experience are less tied to financial markets than major losses that the top 1% experiences through depleted capital gains income. The middle class and the poor tend to take large hits in income during financial crises because many lose jobs through unemployment, face pay cuts, or see reductions in their hours worked (Heathcote, Perri, and Violante 2010). As I showed in Chapter 4, the welfare state does reduce inequality some during financial crises through automatic stabilization of social services and programs that supplement income losses for the middle class and poor (Dolls, Fuest, and Peichl 2012); however, it does not necessarily stave off all the inequality caused by financial crises. It is unclear from the literature whether the poor or middle class take a bigger hit during financial crises, however. Income losses for the middle class and poor are likely dependent upon the welfare generosity of the state—particularly unemployment insurance—which is highly variable across countries. Given the previous discussion, I predict that:

> *Hypothesis 6.4: Financial crises will increase upper-tail and top-bottom inequality. It is unclear how it will affect lower-tail inequality.*

6.3 Data and Methods Review

As discussed in detail in Chapter 3, there are several data and methodological differences in Chapter 6 compared to Chapters 4 and 5 that are worth reviewing before discussing the results. The Luxembourg Income Study (LIS) is the only dataset available that has reliable longitudinal data for a representative set of affluent countries on the entire income distribution, making it possible to create the measures of income inequality examined in this chapter (i.e., upper-tail inequality, lower-tail inequality, and top-bottom inequality). LIS data were appended to the Comparative Welfare States dataset, the primary dataset in this dissertation. The LIS has only 120 observations for 16 affluent nations between 1981 and 2011. The resulting dataset is unbalanced with an uneven number of years per country and uneven intervals between observations. First, two nations, Japan and New Zealand, are excluded altogether from the analyses. Second, the remaining 16 nations are represented anywhere between five (Switzerland) and 11 (Italy) years in the analyses. Third, the data in Chapter 6 are slightly skewed toward the latter half of the neoliberal era. All these things mean that the sample of country-years used in this chapter is slightly different than the samples in Chapters 4 and 5; however, these differences are not substantial given the comparison of sample means conducted in Chapter 3. Finally, upper-tail, lower-tail, and top-bottom inequality are all derived from measures of post-tax and transfer household income, so these analyses are most comparable to the "SM Inequality" measures used in Chapter 4.

The unbalanced panel design has several important implications for the analyses. First, the uneven intervals between observations in the dependent variable limit the use of differences and lags of the dependent variables that are necessary to estimate error correction models (ECMs) that were used in Chapters 4 and 5. As a result, the dependent variables in this chapter

are measured as *levels* of upper-tail, lower-tail, and top-bottom inequality. However, the unbalanced panel design does not affect the lag structure of the independent variables. Second, ECMs are not used in Chapter 6 because the dependent variable cannot be differenced or lagged. Instead, I use OLS regression models with lagged independent variables and Driscoll-Kraay standard errors. These models address three of the four major problems that are typically present in macroeconomic time series analysis: autocorrelation, panel heteroscedasticity, and cross-sectional dependence. In ECM models, the fourth potential problem associated with macroeconomic time series data, unit roots, is addressed by differencing and lagging the dependent variables in order to make them stationary. In the models estimated in this chapter, it is impossible to determine whether unit roots are present because Fisher panel unit root tests fail to work due to the small sample size. Despite this one shortcoming, OLS models with lagged independent variables and Driscoll-Kraay standard errors are most appropriate to address the research question in Chapter 6. Finally, the smaller sample size in Chapter 6 (120) compared to Chapters 4 and 5 (540) limits the degrees of freedom, which has implications for hypothesis testing. As a result and also because there is less extant empirical and theoretical research on the effects of neoliberalism and financialization on the dependent variables used in this chapter, the analyses in Chapter 6 are largely exploratory and caution should be used in drawing strong substantive conclusions from this chapter.

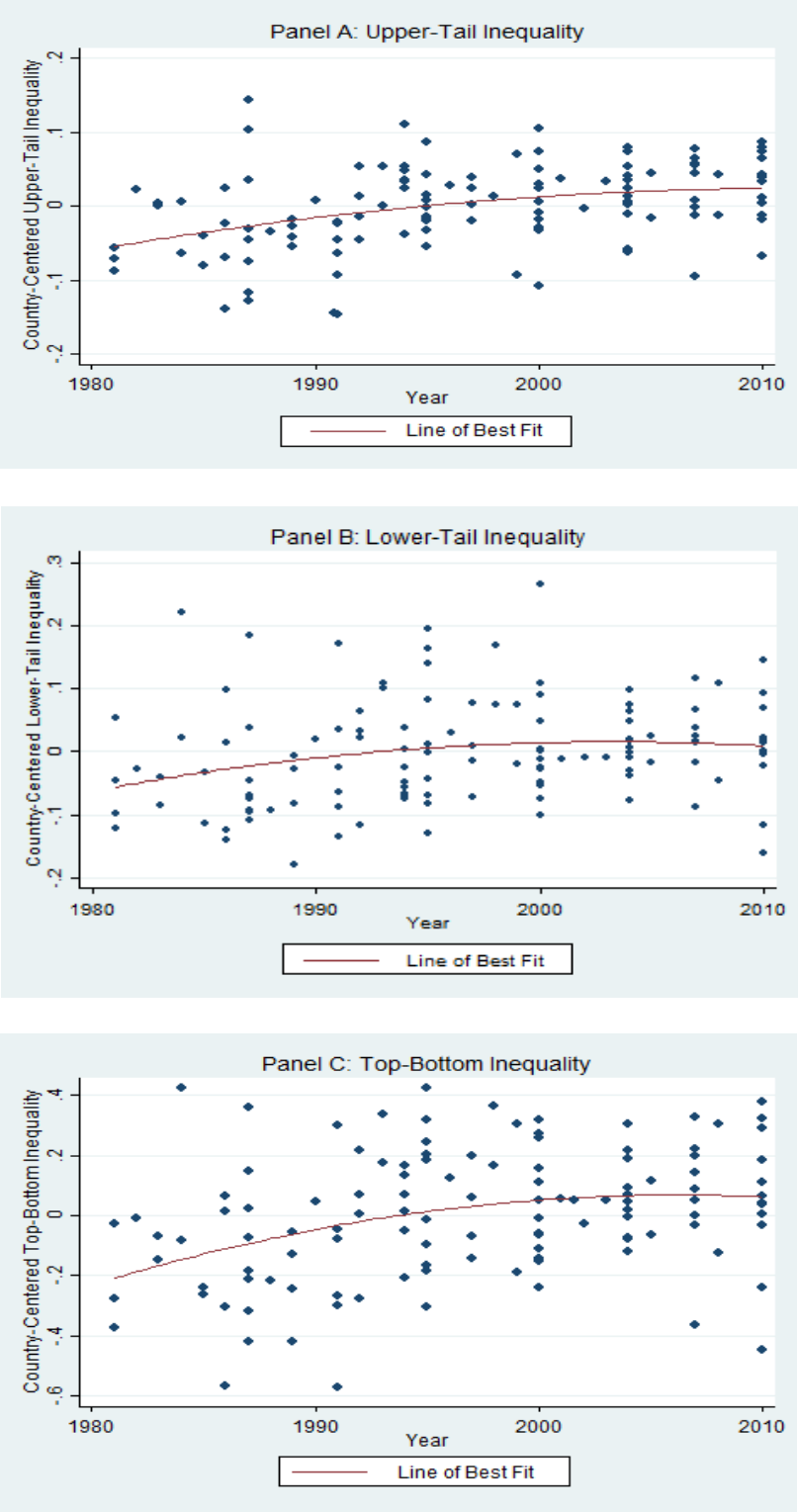
An additional issue to consider for this chapter is unobserved heterogeneity by country and year. Determining the proper specification for time is particularly complex for these data. As illustrated in Figures 6.1, 6.2, and 6.3, there was significant country-level variation in the dependent variables, which suggests that country fixed effects are appropriate for these models. Additionally, the time trends appeared to be curvilinear despite moderate variation across

countries. For the reader's benefit, I show a series of different models for each dependent variable using a combination of country fixed effects, year fixed effects, and time trend variables to illustrate the decision-making process with regard to model specification. First, I estimated three separate sets of analyses for the three dependent variables—upper-tail inequality, lower-tail inequality, and top-bottom inequality. Within each set of analyses, I ran five separate models with different specifications of year fixed effects, country fixed effects, and time trend variables in order to determine the optimal model specification for the results. In model 1 of each table, the independent variables are lagged and there are no year or country fixed effects or time trend variables. In model 2, I add *only* year fixed effects to determine if there is unobserved heterogeneity related to year-specific factors and do not include country fixed effects. In model 3, I add *only* country fixed effects to determine if there is unobserved heterogeneity among countries. In model 4, I include *both* year and country fixed effects. This model is the most conservative model, but it is costly in degrees of freedom as there are only 120 observations and 16 country fixed effects and 26 fixed effects for year.[10] In model 5 of each table, I include country fixed effects and time and time squared. Careful examination of these alternatives reveals that (a) country fixed effects are absolutely necessary to properly specify the model, and (b) time and time squared perform as well as year fixed effects and conserve 24 degrees of freedom. Based on these considerations, in the analyses below I put the most emphasis on the model with country fixed effects and time and time squared (i.e., model 5) in each set. In Figure 6.4, I present scatterplots of country-centered values for each dependent variable across time and then plot the line of best fit for each scatterplot. Country-centered values for each dependent variable are derived by subtracting each country's observed values from that country's mean

[10] Only 26 of the 31 years in the full period of 1981 to 2011 are available in the LIS for the 16 countries used in these analyses.

values. This process removes the between-country variation from the dependent variables and reveals within-country time trends in each series. As one can see, each of the three dependent variables has a modest positive curvilinear trend, which suggests that time and time squared are appropriate specifications for time. Additionally, I ran fixed effects models predicting upper-tail, lower-tail, and top-bottom inequality with time and time squared, and both time variables were significant in each model. Moreover, this model was superior to a model with country fixed effects and a linear time trend alone. All this evidence provides overwhelming support that using country fixed effects and time and time squared is the most appropriate specification for these data.

Figure 6.4: Within Country Variation in Upper-Tail, Lower-Tail, and Top-Bottom Inequality in 16 Affluent Nations, 1981-2011.



Below, I present the analyses of the relationships between neoliberalism, financialization, upper-tail inequality, lower-tail inequality, and top-bottom inequality from 1981 to 2011.

6.4 Results

There are several stages of analyses in this chapter. For each dependent variable, I run five models to illustrate how model specification impacts the results. In Table 5.1, I present the OLS models with lagged independent variables and Driscoll-Kraay standard errors predicting the relationship between neoliberalism, financialization, and upper-tail inequality. To remind the reader, upper-tail inequality is measured as the income ratio between the 90^{th} and 10^{th} percentiles and represents inequality between the very affluent and the median worker or middle class. I will begin with the discussion of the control variables. In models 1 through 5, unemployment is positively associated with upper-tail inequality. This effect is robust across alternative specifications with year fixed effects, country fixed effects, and time and time squared in the models. This provides evidence that unemployment disproportionately hurts the bargaining power of middle class workers, thus decreasing their wages, while increasing the incomes of the wealthy. Economic growth, as one would expect, increases upper-tail inequality in models 1 and 2; however, the effect is not significant in models 3 through 5 where country-fixed effects are added into the models. This suggests that economic growth disproportionately benefits the very affluent more than the middle class; however, this effect largely operates through unobserved characteristics that differ by nation. Similarly, government employment reduces upper-tail inequality in models 1 and 2; however, the effect is no longer significant in the models with country fixed effects, which are models 3, 4, and 5. This provides some evidence that government employment reduces upper-tail inequality by providing higher incomes for the middle class; however, this effect operates through unobserved differences by country. As one

would expect, union density also reduces upper-tail inequality in models 1 and 2, which suggests unions help middle class wages by improving their bargaining power. The effect of unions is not significant in models 3, 4, and 5 with country fixed effects, though. This suggests that unions affect upper-tail inequality through some unobserved country characteristics. Somewhat surprisingly imports has a negative and significant effect on upper-tail inequality in models 1, 2, 3, and 5; however, the effect is not significant in model 4 with country and year fixed effects. This effect may be due to imports decreasing incomes for the top 10% instead of increasing incomes for the top 50% as the profits from imports are primarily sent abroad. Finally, inward FDI increases upper-tail inequality in models 1, 2, and 4; however, the effect is nonsignificant in models 3 and 5. This suggests that inward FDI can undermine the wages of the middle class; however, this effect appears to operate through unobserved time characteristics in a similar manner that other effects operate through country characteristics.

Table 6.1: The Effects of Neoliberalism and Financialization on Upper-Tail Inequality in 16 Affluent Democracies, 1981-2011 (N=120)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Business cycle					
Unemployment rate	0.018***	0.018**	0.009***	0.010**	0.009**
	(0.003)	(0.004)	(0.002)	(0.003)	(0.002)
Economic growth	0.009***	0.017*	0.001	0.004	0.000
	(0.002)	(0.006)	(0.002)	(0.003)	(0.002)
Labor market structure					
Government employment	-0.008***	-0.008***	-0.007	-0.005	-0.006
	(0.002)	(0.002)	(0.005)	(0.004)	(0.004)
Union density	-0.002*	-0.002*	0.000	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Globalization					
Imports	-0.007***	-0.007***	-0.003*	-0.001	-0.002*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Inward FDI	0.002***	0.002***	0.001	0.002***	0.001
	0.000	0.000	0.000	0.000	0.000
Neoliberalism					
Neoliberal State	0.028***	0.024**	0.013*	0.018	0.015*
	(0.007)	(0.008)	(0.005)	(0.014)	(0.005)
Financialization					
FIRE employment	-0.004	-0.004	0.007**	0.017**	0.009*
	(0.004)	(0.007)	(0.002)	(0.005)	(0.004)
Credit expansion	0.001**	0.001**	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000
Financial crisis	-0.002	0.002	0.001	0.003	0.001
	(0.001)	(0.004)	(0.001)	(0.004)	(0.001)
Year fixed effects	No	Yes	No	Yes	No
Country fixed effects	No	No	Yes	Yes	Yes
Time and time squared	No	No	No	No	Yes
Constant	1.891***	1.900***	1.819***	1.676***	1.774***
	(0.071)	(0.097)	(0.108)	(0.136)	(0.104)
Total R^2	0.763	0.795	---	---	---
Within R^2	---	---	0.299	0.450	0.302

*--p <.05, **--p <.01, *** p--<.001, †-- p< .10 (two-tailed tests).

Driscoll-Kraay Standard Errors in parentheses.

Note: Time trend variables and country dummies are not shown.

Moving on to the key independent variables, the neoliberal state is associated with an increase in upper-tail inequality in models 1, 2, 3, and 5, which supports *Hypothesis 6.1*. In model 4 with both country and year fixed effects, the coefficient is similar in size to the other models (.018) and in the same direction; however, the standard error increases dramatically due to fewer degrees of freedom compared to the other models. In model 5, a one unit increase in the neoliberal state index is associated with a .015 unit increase in the 90-50 income ratio the following year. Overall, the results provide moderately strong evidence that neoliberalism increases upper-tail inequality in affluent nations by decreasing the tax burden for the very affluent and undermining social spending and programs that supplement the incomes of the middle class.

Among the financialization variables, FIRE employment is not significant in models 1 and 2, which do not include country fixed effects; however, it has a significant positive effect in models 3, 4, and 5, which *do* include these effects. This is likely because unobserved differences among countries mask the effects of FIRE employment on upper-tail inequality. These findings provide moderate support for *Hypothesis 6.2*. In model 5, a one-percent increase in FIRE employment is associated with a .009 unit increase in the 90-50 income ratio the following year. This suggests that FIRE employment increases the gap between the very affluent and the middle class by undermining wages for middle class workers and improving incomes for FIRE employees (Tomaskovic-Devey and Lin 2011). Credit expansion is positively associated with upper-tail inequality in models 1 and 2. When country fixed effects are added to models 3, 4, and 5, this effect is no longer significant. These nonsignificant results signal that credit expansion is associated with upper-tail inequality; however, this relationship is caused by unobserved differences among nations. One potential component of financialization that may mediate this

relationship is financial deregulation, which is not available for all of the countries and years in this analysis. In sum, these findings provide weak support at best for *Hypothesis 6.3*. Finally, financial crises do not have a significant impact on upper-tail inequality in models 1 through 5, so I find no support for *Hypothesis 6.4*. The coefficients in models 2 through 5 are in the predicted direction, though.

In Table 6.2, I present the results for the OLS models with lagged independent variables and Driscoll-Kraay standard errors predicting the relationships between neoliberalism, financialization, and lower-tail inequality for 16 nations from 1981 to 2011. To remind the reader, lower-tail inequality is measured as the income ratio between the 50^{th} and 10^{th} income percentiles, which represents the amount of inequality between the median worker, or the middle class, and the poor. I start with a brief discussion of the control variables. The unemployment rate is positively associated with lower-tail inequality in models 1 and 2. This effect is no longer significant when the country fixed effects are included in the models. This suggests that unemployment may be associated with lower incomes for the poor; however, this effect is no longer present when unobserved country characteristics are accounted for. Economic growth is associated with lower-tail inequality in models 1, 2, and 4. This effect is not significant in models 3 and 5. This provides some evidence that economic growth helps the middle class more than the poor despite being largely beneficial to the very affluent as shown in analyses of upper-tail inequality and the top 1% share in Chapter 5. Government employment has no significant effect on lower-tail inequality in models 1 through 5. Union density has a marginally significant negative effect in model 4. Models 1, 2, 3, and 5 have a nonsignificant effect, so there is not strong evidence that unions significantly impact lower-tail inequality one way or the other. Imports is associated with a reduction in lower-tail inequality in models 1 and 2. This effect is

nonsignificant in models 3, 4, and 5, which include country fixed effects. This suggests that imports may be associated with a reduction in income for the median worker relative to the poor; however, this effect is mediated by unobservable country characteristics, such as differences in the sources and types of imports. Finally, inward FDI is positively associated with lower-tail inequality in models 1, 2, and 4. This effect is not significant in models 3 and 5. This provides some evidence that inward FDI can hurt incomes for the poor, particularly if wages for low-skilled jobs are driven downward in order to attract foreign investors.

Table 6.2: The Effects of Neoliberalism and Financialization on Lower-Tail Inequality in 16 Affluent Democracies, 1981-2011 (N=120)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Business cycle					
Unemployment rate	0.017**	0.017*	-0.004	-0.003	-0.004
	(0.004)	(0.006)	(0.003)	(0.003)	(0.003)
Economic growth	0.022*	0.040*	0.004	0.010**	-0.001
	(0.008)	(0.015)	(0.002)	(0.003)	(0.002)
Labor market structure					
Government employment	0.002	0.001	-0.007	0.004	-0.002
	(0.004)	(0.003)	(0.010)	(0.009)	(0.009)
Union density	-0.001	-0.002	0.002	-0.003+	0.000
	(0.001)	(0.001)	(0.003)	(0.002)	(0.002)
Globalization					
Imports	-0.009***	-0.009***	-0.001	0.002	0.002
	(0.001)	(0.001)	(0.003)	(0.002)	(0.002)
Inward FDI	0.003**	0.003**	-0.001	0.002*	0.000
	(0.001)	(0.001)	(0.001)	(0.001)	0.000
Neoliberalism					
Neoliberal State	0.086***	0.086***	0.022	0.052*	0.036+
	(0.011)	(0.012)	(0.018)	(0.018)	(0.020)
Financialization					
FIRE employment	-0.018+	-0.017	0.012*	0.048***	0.029*
	(0.009)	(0.013)	(0.005)	(0.009)	(0.012)
Credit expansion	0.002***	0.002***	0.000	0.000	0.000
	0.000	0.000	0.000	(0.001)	(0.001)
Financial crisis	0.000	0.011	0.004	0.004	0.003
	(0.005)	(0.008)	(0.003)	(0.003)	(0.003)
Year fixed effects	No	Yes	No	Yes	No
Country fixed effects	No	No	Yes	Yes	Yes
Time and time squared	No	No	No	No	Yes
Constant	1.669***	1.595***	1.845***	1.320***	1.546***
	(0.141)	(0.128)	(0.181)	(0.240)	(0.233)
Total R^2	0.652	0.745	---	---	---
Within R^2	---	---	0.163	0.466	0.217

*--p <.05, **--p <.01, *** p--<.001, †-- p< .10 (two-tailed tests).

Driscoll-Kraay Standard Errors in parentheses.

Note: Time trend variables and country dummies are not shown.

Before moving into the discussion of the key independent variables, I want to remind the reader that I did not hypothesize the relationships between neoliberalism, the three components of financialization, and lower-tail inequality. The neoliberal state is associated with greater lower-tail inequality in models 1, 2, and 4 and marginally associated with greater lower-tail inequality in model 5. In model 5, a one-unit increase in the neoliberal state variable results in a .036 unit increase in the ratio of the 50^{th} and 10^{th} income percentiles in the following year. The effect is not significant in model 3, which includes fixed effects but no time trend or year fixed effects. If time (either by year fixed dummies or time and time squared) is accounted for, then more neoliberal states tend to spur greater inequality between the median worker and the poor. While a reduction in government spending and social programs impacts the middle class, the poor are more highly dependent on these programs and therefore face a much larger reduction in income (Wright and Rogers 2015), thus increasing lower-tail inequality.

Among the financialization variables, FIRE employment is associated with greater lower-tail inequality in models 3, 4, and 5 while there is a positive and marginally significant effect in model 1. In model 5, a one-percent increase in FIRE employment is associated with a .029 unit increase in the income ratio of the 50^{th} and 10^{th} percentiles in the following year. In model 2, FIRE employment is not associated with lower-tail inequality when only year fixed effects are accounted for. These findings provide partial support for *Hypothesis 6.2*. As FIRE employment increases creating higher incomes for workers in finance and related industries, there is increased demand for low-wage and low-skill workers to provide services to cater to the financial elite (Moller et al. 2009). Credit expansion is associated with greater lower-tail inequality in models 1 and 2; however, the effect is nonsignificant in models 3, 4, and 5, which include country fixed effects. *Hypothesis 6.3* did not include a prediction for the relationship between credit expansion

and lower-tail inequality. The positive association in models 1 and 2 perhaps indicates that increased credit and leverage in the economy can result in greater pressure to reduce low-skill workers' wages in an effort to minimize labor costs; however, this effect seems to be mediated by unobserved country-level characteristics. I encourage future research to explore in greater detail the relationship between private sector credit, as well as other types of credit, and lower-tail inequality. Finally, financial crises are not associated with lower-tail inequality in models 1 through 5; thus, there is no evidence that these crises impact either the middle class or the poor disproportionately. While the poor and middle class both take hits during financial crises, the relative income ratio between the two is not affected.

Finally, Table 6.3 presents the results for the OLS models with lagged independent variables and Driscoll-Kraay standard errors predicting the relationship between neoliberalism, financialization, and top-bottom inequality. To remind the reader, top-bottom inequality represents inequality between the 90^{th} and 10^{th} income percentiles, or the gap between the very affluent and the poor. These results help triangulate the results of the other two analyses by ascertaining whether rising inequality in the previous tables is driven by the 90^{th}, 50^{th}, and 10^{th} percentiles given that ratios include information from two different parts of the income distribution. Again I will begin the discussion by discussing the results of the control variables. Unemployment is associated with increased top-bottom inequality in models 1 and 2; however, this effect becomes nonsignificant in models 3, 4, and 5. This suggests that unemployment impacts top-bottom inequality through unobserved country characteristics. Economic growth is associated with an increase in top-bottom inequality in models 1, 2, 3, and 4, but it is not significant in model 5. This suggests that most of the benefits of economic growth tend to go to the very affluent; however, this finding is not robust to all model specifications. Government

employment is not associated with top-bottom inequality in models 1 through 5; since government employment mainly generates middle class white collar jobs, it affords very little direct employment or income benefit to the poor. Union density has a significant negative effect in model 4 and a marginally significant effect in model 1; however, it is not significant in models 2, 3, and 5. This provides some evidence that unions can reduce the gap between the very affluent and the poor, but this finding is not particularly strong given that it is only significant under few specifications. On the whole, this does suggest that government employment and union density are providing middle class jobs more than they are providing lower-income jobs; therefore, their weak to nonsignificant effects on top-bottom inequality are not surprising. Imports are associated with a reduction in top-bottom inequality in models 1 and 2; however, the inclusion of country fixed effects makes this effect nonsignificant in models 3, 4, and 5. This suggests that unobserved country characteristics are actually mediating the relationship between imports and top-bottom inequality. Finally, inward FDI is associated with greater top-bottom inequality in models 1, 2, and 4, but it is not significant in models 3 and 5. This provides some evidence that inward FDI benefits the very affluent while hurting the poor; however, this effect is not significant in the key model 5.

Table 6.3: The Effects of Neoliberalism and Financialization on Top-Bottom Inequality in 16 Affluent Democracies, 1981-2011 (N=120)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Business cycle					
Unemployment rate	0.067***	0.067**	0.009	0.012+	0.010
	(0.012)	(0.018)	(0.007)	(0.006)	(0.006)
Economic growth	0.062**	0.113**	0.010*	0.026**	0.000
	(0.018)	(0.037)	(0.004)	(0.007)	(0.005)
Labor market structure					
Government employment	-0.013	-0.014	-0.023	0.001	-0.012
	(0.011)	(0.010)	(0.026)	(0.022)	(0.023)
Union density	-0.005+	-0.006	0.002	-0.010*	-0.002
	(0.003)	(0.004)	(0.006)	(0.004)	(0.004)
Globalization					
Imports	-0.032***	-0.031***	-0.007	0.001	-0.001
	(0.003)	(0.003)	(0.006)	(0.005)	(0.005)
Inward FDI	0.010***	0.010***	-0.000	0.006***	0.001
	(0.001)	(0.002)	(0.002)	(0.002)	(0.001)
Neoliberalism					
Neoliberal State	0.222***	0.212***	0.062+	0.125**	0.093*
	(0.031)	(0.033)	(0.035)	(0.038)	(0.038)
Financialization					
FIRE employment	-0.043	-0.042	0.037**	0.125***	0.073*
	(0.025)	(0.035)	(0.010)	(0.025)	(0.028)
Credit expansion	0.006***	0.006***	0.000	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Financial crisis	-0.003	0.025	0.010	0.012	0.007
	(0.011)	(0.019)	(0.006)	(0.010)	(0.006)
Year fixed effects	No	Yes	No	Yes	No
Country fixed effects	No	No	Yes	Yes	Yes
Time and time squared	No	No	No	No	Yes
Constant	3.130***	3.014***	3.439***	2.188**	2.798***
	(0.375)	(0.381)	(0.500)	(0.627)	(0.558)
Total R^2	0.732	0.795	---	---	---
Within R^2	---	---	0.215	0.475	0.253

*--p <.05, **--p <.01, *** p--<.001, †-- p< .10 (two-tailed tests).

Driscoll-Kraay Standard Errors in parentheses.

Note: Time trend variables and country dummies are not shown.

Moving on to the key independent variables, the neoliberal state is positively associated with top-bottom inequality in models 1, 2, 4, and 5 while it has a positive and marginally significant effect in model 3. In model 5, a one-unit increase in the neoliberal state index is associated with a .093 unit increase in the ratio between the 90^{th} and 10^{th} income percentiles in the following year. Because neoliberalism is associated with a reduction in the tax burdens for the very affluent and a reduction of public goods and social services used by the poor, the gap between the very affluent and poor widens. These results provide support for *Hypothesis 6.1*.

Finally, among the financialization measures, FIRE employment is not associated with top-bottom inequality in models 1 and 2; however, there is a positive association in models 3, 4, and 5, which include country fixed effects. This suggests that unobserved country-level characteristics are masking the results of FIRE employment in models 1 and 2. In model 5, a one percent increase in FIRE employment is associated with a .029 unit increase in the income ratio of the 90^{th} and 10^{th} percentiles in the following year. Overall, this provides support for *Hypothesis 6.2*. As FIRE employment grows, the incomes of the very affluent increase as financial sector workers are paid more money (Tomaskovic-Devey and Lin 2011). Additionally, more low-skill service jobs develop to cater to the needs of the very affluent (Moller et al. 2009). Credit expansion is positively associated with top-bottom inequality in models 1 and 2; however, it is positive but no longer significant in models 3, 4, and 5, which include country fixed effects. Much like the results for upper- and lower-tail inequality, this suggests that credit is associated with top-bottom inequality; however, this effect operates through some unobserved country characteristics, such as financial deregulation. This provides weak support for *Hypothesis 6.3.* Finally, financial crises are not associated with greater top-bottom inequality in models 1 through

5, which does not support *Hypothesis 6.4*. While the very affluent and the poor both face reduced incomes during financial crises, neither is more severely impacted than the other.

6.5 Discussion and Conclusions

While income inequality has been rising in many affluent nations primarily due to gains by the top 1% (Picketty and Saez 2015), this chapter explores what is happening in different parts of the income distribution. Building upon Chapters 4 and 5 in the dissertation, Chapter 6 examines how neoliberalism and financialization impact upper-tail inequality, lower-tail inequality, and top-bottom inequality in 16 affluent nations. Previous research examining the determinants of upper- and lower-tail inequality has focused on declining union membership (Card et al. 2004); the shift from manufacturing to services, deregulation in many industries, a rise in contingent labor (Berhardt et al 2001; Fligstein and Shin 2004; Morgan and Cha 2007), and economic globalization (Wallace, Gauchat and Fullerton 2012). To date, there has been little cross-national research examining the impacts of neoliberalism and financialization on upper- and lower-tail inequality in affluent nations during the neoliberal era barring Fligstein and Shin's (2004) study of the impacts of the shareholder value conception of the firm on inequality in the United States. Chapter 6 fills this gap in the stratification literature.

Table 6.4: Comparing the Effects of Neoliberalism and Financialization on Upper-Tail, Lower-Tail, and Top-Bottom Inequality in 16 Affluent Democracies, 1981-2011

Variable	*Upper-Tail Inequality*	*Lower-Tail Inequality*	*Top-Bottom Inequality*
Neoliberalism			
Neoliberal State	+	+	+
Financialization			
FIRE Employment	+	+	+
Credit Expansion	(+)	(+)	[+]
Financial Crisis	[+]	[+]	[+]

+ / - — Positive/negative coefficient from Model 5 is in the predicted direction and statistically significant.
[+] / [-] — Positive/negative coefficient from Model 5 is in the predicted direction but *not* statistically significant.
(+) / (-) — Positive/negative coefficient from Model 5 is in the predicted direction and statistically significant when country fixed effects are not included, but becomes nonsignificant when country fixed effects are added.

In Table 6.4, I summarize the findings from the models predicting upper-tail (Table 6.1), lower-tail (Table 6.2), and top-bottom inequality (Table 6.3). I focus on the results from preferred model 5 in each table with country fixed effects and time and time squared as it is the most parsimonious and best fitting model. The table summarizes three broad types of outcomes that occur in the tables: a) whether the result is in the predicted direction and statistically significant; b) whether the result is in the predicted direction but not statistically significant; and c) whether the result is in the predicted direction and statistically significant when country fixed effects are not included, but nonsignificant when country fixed effects are added. For the purpose of this table, I treat the predictions for lower-tail inequality as being in the same direction as those for upper-tail and top-bottom inequality even though formal predictions for lower-tail inequality were not made.

The first and most obvious result to be gleaned from this summary table is that none of the results for the key independent variables are in an unanticipated direction which offers broad, but thin, support for the general hypotheses about neoliberalism, financialization, and income distribution.[11] Turning to specific results, the effect for the neoliberal state in model 5 is positive and significant for upper-tail inequality, lower-tail inequality, and top-bottom inequality. These findings provide strong support for the general hypothesis that the very affluent disproportionately benefit from neoliberalism relative to the middle class and the poor, and also that the middle class benefit at the expense of the poor. Not only does neoliberalism boost the incomes of the affluent after taxes by reducing their tax burdens, they also undermine the incomes of the middle class by reducing government spending and investment, as well as cutting

[11] It should be noted that there were a few models in Tables 6.1, 6.2, and 6.3 where the sign of the coefficient was not significant and in the direction not predicted by the hypotheses, but these instances occurred exclusively in models in which country fixed effects were not included. As noted elsewhere, the country fixed effects are necessary to properly specify the model.

social programs (Kotz and McDonough 2010). And while the middle class and poor lose out to the very affluent because of neoliberalism, the poor are more dramatically affected because their incomes are more tightly tied to cutbacks in the provision of public goods and services by the state.

Similarly, FIRE employment was significant and positive in model 5 for all three dependent variables. This suggests that as employment in finance, insurance, and real estate increases, the very affluent leave behind both the middle class and the poor, which supports two of the three hypotheses. Not only are workers in the finance industry paid at a much higher rate than those in nonfinancial industries (Wright and Rogers 2015), but the same applies to financial managers and accountants in nonfinancial firms (Tomaskovic-Devey and Lin 2011). As the financial sector grows in size and economic and political influence, this tends to benefit the very affluent and the rich. The middle class and poor are disproportionately disadvantaged when FIRE employment grows for several reasons. First, the shareholder value conception of the firm encourages firms to reduce labor costs to the minimum in order to maximize profits and boost stock prices and shareholder value (Fligstein and Shin 2007). This hurts middle class jobs and incomes because one strategy used by managers is to target unionized employees, which often have better benefits and pay (Tomaskovic-Devey and Lin 2011). The poor seem to be more vulnerable in this scenario; however, as FIRE employment is also associated with greater lower-tail inequality, which suggests that the poor are falling behind the middle class. Because lower-income workers have less bargaining power due to a lack of in-demand skills, they may be more vulnerable to cost-cutting efforts associated with shareholder value. In particular, cost-cutting technology, such as automatic checkout lines at grocery stores, used to boost profits and shareholder value may disproportionately impact the poor over the middle class. Indeed,

Fligstein and Shin (2007) argue that companies who use cost-cutting technology tend to fire lower-skilled workers and replace them with fewer high-skilled workers. These changes in workplace practices may disproportionately put low-income workers at risk of income loss.

The analyses in this chapter provide less robust support that credit expansion has affected upper-tail, lower-tail, and top-bottom inequality. Overall, credit expansion was associated with greater upper-tail and lower-tail inequality in models where country-fixed effects were not included; however, it was not significant in the models that included country fixed effects. This suggests that private sector credit is related to upper- and lower-tail inequality; however, this relationship is mediated by unobserved country characteristics, such as financial deregulation or other factors. While private sector credit expansion does increase inequality and the top 1% share by allowing the rich to use leverage to make speculative moves (Guttman 2008), those benefits may not extend fully to the very affluent, represented by the 90^{th} percentile. I encourage future research to explore the relationship between private sector credit and different parts of the income distribution in greater detail. There was no significant effect of credit expansion on top-bottom inequality; however, it was positive and in the predicted direction.

Finally, the analyses in this chapter signal that financial crises, net of other variables, do not have a significant impact on upper-tail, lower-tail, or top-bottom inequality. The coefficients in model 5 for each dependent variable are positive and in the correct direction; however, they fail to reach standard significant levels in each model. While it is encouraging that these effects are consistently in the predicted direction, the lack of statistical significance suggests caution, especially considering that financial crises were found to increase MG and SM inequality in Chapter 4. It is possible that the very affluent may face income losses in years affected by financial crises; however, this effect may vary significantly across nations thus masking the

effect. Alternatively, financial crises may affect upper-tail and lower-tail inequality through unemployment and economic growth, which are used as controls in these analyses. Finally, the effect of financial crises may have been significant if the entire balanced sample of 18 nations from 1981 to 2011 were available or if ECM models were feasible; however, it is impossible to determine this with the data limitations. I encourage future research to explore this finding in greater detail in the future.

While much of the political and scholarly attention focuses on rising incomes for rich and affluent and stagnant wages for the middle class (see Leicht and Fitzgerald 2014 for a summary), there has been less attention to what is going on with the poor. The analyses of this chapter show that neoliberalism and financialization has actually benefitted the affluent at the expense of both the middle class and the poor; however, the poor have disproportionately fallen behind the middle class as well. The reduction of social services and public goods (Kotz and McDonough 2010), as well as the rise of low-wage, low-skill and contingent work in response to neoliberalism and financialization (Moller et al. 2009), has caused the poor to fall farther and farther behind. Individuals without college degrees, who tend to be over-represented in the bottom 10% of income earners, are increasingly at risk of experiencing a loss of income and well-being in affluent nations with higher levels of neoliberalism and financialization (The Economist Staff 2014). Indeed, college wage premiums rose in several affluent nations during the 2000s like France, the United States, the United Kingdom, and Ireland. In 2011, the college degree income premium in the United States was 77%, in other words, the average person with a college degree made 77% more money than those without a college degree. The college premium was typically lower in other nations: 57% in the United Kingdom, 47% in France, and just 25% in Sweden. One should note that the nations with higher college degree premiums tend

to also have greater levels of neoliberalism and financialization. This may not be a causal relationship, but it does provide grist for future research to explore this connection in greater detail. While the incomes of the middle class have been targeted by cost cutting initiatives in government programs and financialization through shareholder value, the results in this chapter suggest that policy-makers should be more attentive to the poor as they appear to face disproportionate losses in nations with higher levels of neoliberalism and financialization.

If nations want to reduce inequality, one of two options would need to occur at the minimum. The first option would be to move away from the shareholder value conception of the firm and reinvest profits gained in production and trade into workers and local communities. This would reduce market-generated (MG) inequality and create a more equal distribution of disposable income. If financialization and the shareholder value of the firm are trends that cannot be easily thwarted, then a movement toward less neoliberalism, stronger welfare states, and more expansive social programs could reduce income inequality through redistribution. Decoupling income from the market (such as providing a universal basic income), providing more generous unemployment insurance to help workers in times of crisis, and increasing investments in education and skill-building would help middle class workers boost their incomes and especially help the poor break out of poverty. These two options together would be particularly effective at reducing inequality. In the next chapter, I summarize the dissertation, build upon the suggestions mentioned above, and discuss the future of income inequality in affluent nations as they march forward in the era of neoliberal financialization.

CHAPTER 7: REFLECTING ON INCOME INEQUALITY IN THE ERA OF NEOLIBERAL FINANCIALIZATION

7.1 Introduction

In many affluent nations, economic inequality has been rising during the neoliberal era, primarily due to an increase the share of income and wealth controlled by the rich (Volscho and Kelly 2012; Picketty 2013; Picketty and Saez 2015; Wright and Rogers 2015). In this dissertation, I provide a comprehensive examination of the impacts of neoliberalism and financialization—corresponding to two of the dominant transformations of the social structures of accumulation during the neoliberal era—on income inequality in affluent nations from 1981 to 2011. While a growing number of studies have examined the relationships between neoliberalism and income inequality (Bergh and Nilsson 2008) and financialization and income inequality (Moller and Rubin 2008; Zalewski and Whalen 2010; Assa 2012; Kus 2012; Volscho and Kelly 2012; Arnum and Naples 2013; Flaherty 2015), there are still unresolved issues in the literature. This dissertation improves upon previous research in several ways. First, much of the current research on financialization and income inequality tends to focus on a single measure—often FIRE employment or FIRE value added—to represent a multifaceted concept. This dissertation improves upon previous research by examining three components of financialization—FIRE employment, credit expansion, and financial crises—to better capture the complexity of the concept.

Second, most of the previous research tends to focus on one measure of income inequality, often measured as the Gini index before or after taxes, which does not reveal if neoliberalism and financialization impact income inequality by creating unequal market incomes, limiting redistribution, or a combination of the two. To address this shortcoming, I

examine market-generated (MG) inequality, redistribution, and state-mediated (SM) inequality in Chapter 4. Third, barring a few studies (i.e., Volscho and Kelly 2012; Flaherty 2015), much of the previous research tends to focus on the Gini index, which is a common and effective summary measure of income inequality. A weakness to the Gini index is that it tends to be biased towards changes in the middle of the income distribution and provides little information about how different parts of the income distribution are impacted. To address this shortcoming, I explore the impacts of neoliberalism and financialization on the top 1% share of income in Chapter 5 and upper-tail, lower-tail, and top-bottom inequality (measured as the 90-50, 50-10, and 90-10 income ratios, respectively).

Fourth, I improve upon previous research by examining a standard collection of 18 affluent nations for the entire neoliberal period in order to improve the generalizability of previous research to other affluent nations. And finally, I use error-correction models (ECMs) in Chapters 4 and 5 to address several issues related to macroeconomic time series analyses—namely unit roots, autocorrelation, and panel heteroscedasticity. Additionally, ECMs decompose effects into instantaneous, short-run, and long-run effects, which allow researchers to better understand the dynamics of inequality.

To conclude this dissertation, I first provide an overview of the findings in the three empirical chapters to summarize the main results. I then discuss the implications of these analyses by returning to SSA theory in order discuss the ways that changes in capital accumulation have shaped income inequality in the neoliberal era in order to think about the big picture of where inequality may be headed in affluent nations. Finally, I discuss the limitations of this research and the potential for future research.

7.2 Summary of Findings

The empirical chapters of this dissertation explore the ways that one measure of neoliberalism, the neoliberal state, and three measures of financialization—FIRE employment, credit expansion, and financial crises—affect income inequality in affluent nations from 1981 to 2011. In Chapter 2, I outline the theory and hypotheses associated the key independent variables on each of the seven measures of income inequality—MG inequality, redistribution, and SM inequality in Chapter 4; the top 1% income share in Chapter 5; and upper-tail, lower-tail, and top-bottom inequality in Chapter 6.

Before discussing the results, I will first summarize the methods of each chapter. Chapter 4 examined the impacts of neoliberalism and financialization on three measures of income inequality—MG inequality, redistribution, and SM inequality—in 18 affluent nations from 1981 to 2011. ECMs are utilized to address unit roots, autocorrelation, and panel heteroscedasticity and to decompose effects into instantaneous, short-run, and long-run effects. Overall, the focus was on long-run effects because they were the strongest and most theoretically relevant; however, I discuss significant instantaneous and short-run effects when present, as well. Below, I summarize the findings from each chapter. Chapter 5 examines the effects of neoliberalism and financialization on the top 1% share of income and uses ECMs in the analyses, much like Chapter 4. The key difference in Chapter 5 is that instantaneous, short-run, and long-run effects are given equal consideration discussion. Not only are there more significant instantaneous and short-run effects due to the variable being more volatile and having more year-to-year variation, but the timing of the effects is theoretically important for the top 1% share, as well. Finally, Chapter 6 examines the impacts of neoliberalism and financialization on upper-tail, lower-tail, and top-bottom inequality in 16 affluent nations from 1981 to 2011. Due to the unbalanced panel

design, limited sample size (120 observations), and uneven intervals between observations, ECMs were not appropriate for these analyses. While I explored a variety of different model specifications, I ultimately decided that OLS models with country fixed effects, time and time squared, lagged dependent variables, and Driscoll-Kraay standard errors to analyze the results were the most appropriate given the structure of the data, the time trends in the dependent variables, and the need for parsimony.

In Table 7.1, I summarize the key findings from Chapters, 4, 5, and 6. Whereas the organization of the chapters has been based on the dependent variables, the discussion in this chapter will be organized around the influence of the independent variables. In other words, I will focus on one key independent variable at a time spanning all three chapters, starting with the neoliberal state. In Chapter 4, I found that the neoliberal state increased MG inequality, decreased redistribution, and increased SM inequality over the long-run, which supports *Hypothesis 4.1*. In other words, decreasing top marginal tax rates and government consumption and investment not only creates more unequal market incomes as it limits the amount of middle wage jobs, but it also reduces redistribution by decreasing tax burdens for the rich and often leads to cuts in social programs and services that help bolster the incomes of the middle class and the poor after taxes and transfers are accounted (Kotz and McDonough 2010; Wright and Rogers 2015).

Table 7.1: Summary of Findings from Chapters 4, 5, and 6

	Chapter 4			*Chapter 5*			*Chapter 6*		
Depedendent Variable	*MG inequality*	*Redistribution*	*SM inequality*	*Top 1% share*	*Top 1% share*	*Top 1% share*	*Upper-tail*	*Lower-tail*	*Top-bottom*
Neoliberalism									
Neoliberal state	+	-	+	+	+	+	+	+	+
Financialization									
FIRE employment	+	-	+	0	+	+	+	+	+
Credit expansion	+	-	+	0	+	+	(+)	(+)	[+]
Financial Crises	+	+	+	0	-	-	[+]	[+]	[+]
Method	ECM long-run	ECM long-run	ECM long-run	ECM instantaneous	ECM short-run	ECM long-run	OLS DK	OLS DK	OLS DK

+ / - — Positive/negative coefficient from Model 5 is in the predicted direction and statistically significant in Tables 4.1, 4.3, 4.5, 5.2, 5.3, 5.4, 6.1, 6.2, and 6.3.

[+] / [-] — Positive/negative coefficient from Model 5 is in the predicted direction but *not* statistically significant in Tables 6.1, 6.2, and 6.3.

(+) / (-) — Positive/negative coefficient from Model 5 of Tables 6.1, 6.2, and 6.3 is in the predicted direction and statistically significant when country fixed effects are not included, but becomes nonsignificant when country fixed effects are added.

In Chapter 5, I establish that the neoliberal state increases the income shares of the top 1% through instantaneous, short-run, and long-run effects, which supports *Hypothesis 5.1*. Not only do reductions in top marginal tax rates immediately increase the incomes of the rich after accounting for taxes, the neoliberal state provides additional short-term and long-term benefits to the top 1% as it reduces state capacity to provide government consumption and investment that limits the amount of middle income jobs in the economy (Kotz and McDonough 2010).

Finally, Chapter 6 provides evidence that the very affluent, represented by the 90^{th} income percentile, also benefit from neoliberalism at the expense of the middle class, represented by the 50^{th} percentile, and the poor, represented by the 10^{th} percentile. The neoliberal state increases upper-tail inequality, or the 90-50 income ratio, by reducing tax burdens for the very affluent and limiting government consumption and investment, which benefit the middle class (Kotz and McDonough 2010). While middle class lose out to the very affluent as a result of the neoliberal state, the poor fall even farther behind as the neoliberal state increases lower-tail inequality, or the 50-10 income ratio. It is true that the middle class certainly benefit from government consumption and investment; however, the incomes of the poor are particularly vulnerable to the neoliberal state because cuts in social programs such as unemployment insurance, education and skill development, healthcare, and welfare disproportionately impact the poor. The neoliberal state, perhaps unsurprisingly given the last two findings, also increases top-bottom inequality, or the 90-10 income ratio. Overall, the neoliberal state is good for the rich and very affluent while not so beneficial to the middle class and the poor. These findings support *Hypothesis 6.1*.

Turning to the first measure of financialization—finance insurance, and real estate (FIRE) employment—Chapter 4 shows that FIRE employment increases MG inequality,

decreases redistribution, and increases SM inequality over the long run, which supports *Hypothesis 4.2*. As FIRE employment increases, the economic and political power of finance increases, as well. This creates more unequal market incomes as financial sector employees, as well as those working financial services in nonfinancial firms, have experienced disproportionate income growth over the last few decades as the shareholder value conception of the firm has become dominant in financialized economies (Fligstein and Shin 2007; Tomaskovic-Devey and Lin 2011; Wright and Rogers 2015). Additionally, the growth in FIRE employment reduces redistribution over the long-run. While there are several possibilities of the mechanisms behind this effect, the growth of the FIRE sector likely allows finance to shift tax policies in favor of the rich and corporations, which can help bolster corporate profits and encourage additional investment in stocks, and to limit taxes on capital gains. Ultimately, these two processes combined result in greater SM inequality, or more unequal disposable incomes, in affluent nations.

Chapter 5 affirms that growth in FIRE employment primarily benefits the rich over the short-run and long-run thus supporting *Hypothesis 5.2*; however, there is no instantaneous effect. This suggests that the growth in FIRE employment symbolizes a macroeconomic shift in which finance is more economically and politically powerful and the shareholder conception value of the firm is more dominant (Fligstein and Shin 2007). FIRE employment likely has no instantaneous effect on the top 1% share because the FIRE sector has some disproportionately high income jobs but also middle and low income jobs thus masking the instantaneous labor market effect.

Chapter 6 shows that FIRE employment benefits the very affluent at the expense of the middle class and the poor. Increased FIRE employment is associated with greater upper-tail

inequality as FIRE disproportionately creates high-income jobs (Tomaskovic-Devy and Lin 2011). Additionally, the shareholder value conception of the firm puts downward pressure on middle class wages in order to minimize labor costs and maximize profits to attract more investment in corporate stocks (Fligstein and Shin 2007). Increased FIRE employment is also associated with greater lower-tail inequality. While the middle class lose out to the very affluent, the poor also fall behind the middle class as a result of the growth in the FIRE sector. The incomes of the poor are particularly vulnerable to the shareholder value conception of the firm due to the implementation of labor-saving technologies, which often replace the jobs of low-skilled workers (Fligstein and Shin 2007). This has not only led to a reduction in the wages and number of jobs at the bottom, it has also deskilled the work of many occupations, which decreases their bargaining power. Intuitively, FIRE employment also increases top-bottom inequality as the poor fall behind the rich in their relative incomes. These findings all support *Hypothesis 6.2.*

The second measure of financialization is credit expansion, which represents the amount of leveraging built into the private sector of affluent nations. Barring Flaherty's (2015) study of financialization and the top 1% share in 16 affluent nations, credit expansion is a relatively unexplored piece of the puzzle in the relationship between financialization and income inequality. In Chapter 4, I establish that rising levels of private sector credit relative to the size of the economy increase MG inequality, reduce redistribution, and increase SM inequality over the long run, which supports *Hypothesis 4.3*. As private sector credit increases, the amount of leveraging in the economy leads to potentially lucrative profits but also potentially devastating losses due to the interlocking nature of the financial system, which largely serve the interests of the rich (Lapavitsas 2013). Additionally, credit expansion decreases redistribution as financial

firms and large corporations put pressure on the state to reduce their tax burdens. Ultimately this leads to more unequal SM inequality, or inequality in disposable incomes.

In Chapter 5, I provide evidence of the assertion that credit expansion largely serves the interests of the rich as it increases the top 1% share in affluent nations over the short run and long run thus supporting *Hypothesis 5.3*; however, there is not a significant instantaneous effect. The growth of private sector leverage allows wealthy investors and financial institutions to use risky speculative activities to reap potentially huge rewards (Lapavitsas 2013). The development of derivatives and other types of complex financial instruments allows the rich to hedge their losses in the event that their investments go sour (Guttman 2008), which is a protection that the middle class and poor often lack. The poor and middle class are exposed to the risky behaviors of speculators because the interlocking nature of the financial markets.

Chapter 6 provides weak support for *Hypothesis 6.3* that credit expansion increases upper-tail, lower-tail, and top-bottom inequality as it was not significant in the final model; however, it was significant in models 1 and 2, which did not include country fixed effects. There are several potential explanations for this finding. First, the fact that the effect becomes nonsignificant in models with country fixed effects suggests that some unobserved country-level variable, like financial deregulation, might explain the positive relationships found in models 1 and 2. Second, it is possible that credit expansion is more strongly tied to the incomes of the top 1% than it is the 90^{th} income percentile. As a result, 90^{th} income percentile may benefit from credit expansion, but it does not disproportionately benefit relative to the middle class and the poor.

Finally, the third measure of financialization is financial crises, which is measured as stock market crises, and represents instability and volatility in financial markets caused by

speculative activities that become more common in highly financialized nations. In Chapter 4, there are two competing hypotheses related the relationships between financial crises and income inequality and redistribution: the austerity hypothesis and the welfare stabilization hypothesis. Both agree that financial crises should increase MG and SM inequality over the long run as the middle class and poor tend to experience greater income losses than higher income households because of job losses, wage cuts and freezes, and losses in benefits (Heathcoate, Perri, and Violante 2010). The main difference between the two hypotheses is in relation to the expectation of financial crises' effects on redistribution. The austerity thesis, *Hypothesis 4.4a*, predicts that years affected by financial crises will reduce redistribution as nations enact neoliberal austerity, such as cutting social programs and services, in order to balance the government budget, which faces fiscal strain during crises (Harvey 2010). The welfare stabilization thesis, *Hypothesis 4.4b*, expects that financial crises increase redistribution by causing automatic stabilizers in existing social programs, such as unemployment insurance, food assistance, and other types of social welfare, kick in to reduce *some*, but not *all*, of the inequality created by financial crises (Dolls et al. (2012; Baird 2014). The analyses in Chapter 4 show that financial crises increase MG inequality, redistribution, and SM inequality, which supports *Hypothesis 4.4b* or the welfare stabilization hypothesis.

Chapter 5 explores the impacts of financial crises on the top 1% share of income and finds that years affected by financial crises see a reduction in the top 1% share in the short run and long run, which supports *Hypothesis 5.4;* however, there is no significant instantaneous effect. Because the incomes of the rich are often tied to capital gains, years affected by stock market crises hurt the rich compared to other parts of the income distribution (Picketty and Saez 2015). Chapter 6 then explores the ways that financial crises affect upper-tail, lower-tail, and

top-bottom inequality. While the rich face losses during financial crises, the very affluent, represented by the 90th income percentile, do not face quite the same penalty relative to other income groups. Indeed, the effects of financial crises on upper-tail, lower-tail, and top-bottom inequality are positive; however, they are not significant in any of the models. I encourage future research to more fully explore these findings.

All in all, the analyses of this dissertation show that neoliberalism and financialization typically increase income inequality in affluent nations in a variety of ways. Primarily, they both help the rich and very affluent at the expense of the poor and the middle class. In the next section, I return to SSA theory and discuss the connections between capital accumulation and incomes of the rich during the era of neoliberal financialization. I then provide a discussion of the future of inequality given recent changes in the economies of affluent nations.

7.3 Theoretical Implications

There are several key theoretical implications that can be derived from the analyses of this dissertation. The first implication relates to the major theoretical framework of this dissertation: SSA theory. Coming out of World War II, many affluent nations experienced a decline in income inequality as steady economic growth and development and the strength of labor allowed wages to be strong and the middle class grew (Bowles and Gintis 1982). In an effort to rein in the power of labor in the post-World War II era, capitalists developed bureaucratic control, or complex layers of hierarchical management within firms, to better control workers (Gordon, Edwards, and Reich 1982). Additionally, capitalists divided workers by race, class, gender, occupation, and industry in order to undermine class consciousness and break the strength of organized labor. During the 1970s, capitalists were increasingly under a crunch due to stagflation: a combination of sluggish economic growth and inflation caused by a

global shift in incomes and profits from affluent Western nations to oil-rich nations in the Middle East and other parts of the world (Tomaskovic-Devey and Lin 2011). In an effort to reboot the economy and reclaim the dominance of the rich over the economies of affluent nations, SSA scholars argue that the neoliberal era, or the period from 1981 to the present, is defined by three separate and distinct SSAs: spatialization (Brady and Wallace 2010), neoliberalism (Kotz and McDonough 2010), and financialization (Tabb 2010). The SSA literature divides these three processes out into three separate camps, but this dissertation shows the interrelations of each of these processes and how they complement each other as strategies of capital accumulation that are used together. While these three processes may have contributed to creating *some* new economic growth, they have primarily allowed capitalists to tilt the global economy in their favor. I show that these three new developments, primarily focusing on neoliberalism and financialization, in the neoliberal SSA create economies that work very well for the rich while the middle and lower classes struggle. Indeed, economic growth in the neoliberal era even increases income inequality and boosts the incomes of the top 1% as is illustrated in the results of Chapters 4 and 5 respectively. This speaks to the frustrations of many workers in the United States, United Kingdom, Germany, and other affluent nations that feel that the economy is rigged and serves the interests of a few elites while neglecting the middle class and poor.

While the neoliberal era has brought upon many positive developments, such as new communication technology, cheaper goods for consumers like TVs, computers, and other electronics, and the spread of different cultures across the globe, neoliberalism and financialization in particular also mark a structural shift in social, economic, and political power that favors the rich. This dissertation illustrates that neoliberalism and financialization not only create more unequal market incomes but also put fiscal pressure on the state to reduce

redistribution, which shifts the income distribution in a way that benefits the rich at the expense of the poor and the middle class. Deregulation of finance allows the rich to increase leveraging and speculative activities that can lead to periods of prosperity and massive income growth for the rich; however, unsustainable levels of leverage and private sector credit will ultimately lead to financial crises. Indeed, Minsky (1982) noted that financial crises are part and parcel of to the business cycles of capitalism; however, he warned that economic growth based on speculative activities and leveraging, which are more common in financialized capitalism, can lead to deeper and more frequent cycles of booms and busts. However, the interlocking nature of the financial system in affluent nations means that the general public is increasingly exposed to the risky behaviors of the wealthy. While the rich face income losses during financial crises (that they largely contribute to), the rebound in income of the top 1% during economic recoveries vastly exceeds those of the middle class and poor (Picketty and Saez 2015). Thus, in highly financialized nations, neoliberalism and financial deregulation have created a social structure of accumulation that largely serves the interests of the rich during good times and spreads the consequences of their risky behaviors throughout the global economy, largely on the backs of governments and the general public. In other words, there is little accountability for the actions of the rich in the era of neoliberal financialization.

In order to reorient the economy towards serving the interests of the general public instead of a wealthy few, policy-makers need to consider a mixture of new and old actions. First, increased government regulation over finance is needed in order to ensure accountability for the actions of speculators in the financial sectors of affluent nations. After the Great Recession, there was tough rhetoric over reigning in the power of finance in the United States and other affluent nations. Years later, much of the tough talk and initial regulations has died down among policy-

makers due the lobbying power of the financial elite (Reich 2016). The Dodd-Frank Act in the United States, the Financial Services Act of 2012 in the United Kingdom, and a series of financial regulation laws passed in Germany helped to curtail some of the risky activities that contributed to the 2007-2008 collapse; however, many of the strictest regulations have been fended off by the financial sector who argue that they reduce competiveness and efficiency in the global economy. The reality of the 21st century economy is that the global economic and financial elite's interests are interpreted as the interests of the general public and thus are held as the utmost priority. And global competition means that financial regulations in affluent nations puts financial firms at a disadvantage compared to growing financial centers in Asia, such as Shanghai, Singapore, and Hong Kong. Thus, business as usual resumes, and financial regulation is stymied in an effort to maintain competiveness. Given that the dominance of finance over the global economy is unlikely to fade, governments and international organizations need to think of ways to create regulations that are effective yet are not easily eroded by the lobbying efforts of finance.

A second development that nations need to consider is the reversal of neoliberal policies regarding the state, welfare systems, and labor, which is a difficult but necessary task to undertake. Financialization and growing gaps in the returns on education in affluent nations are likely to continue to create unequal incomes and opportunities in the labor markets of affluent nations. Intervention by the welfare state in the form of unemployment insurance, government investment in research, infrastructure, and jobs, education and skill programs, and the provision of public goods can help protect workers from the instability of financial markets caused by speculation and other risky activities. Increased protections for workers to organize and collectively bargain can allow workers to fight for better wages, benefits, and working

conditions, which can boost incomes for those in the bottom half of the income distribution. These changes would mean lower income shares for the top 1%; however, it does not mean that they would be worse off than they are now. Indeed, increased incomes for the middle class and poor help stimulate economic activity, which helps the businesses of the rich and increases their incomes (Reich 2016). The economy is not a zero-sum game. There are ways to make the economies of affluent nations more equitable yet still strong that need to be explored in the future.

These would be lofty goals in today's political climate, though. It would require that workers and the general public organize to create socially and politically powerful movements to reclaim both politics and the economy to favor all instead of a select few. In the United States, reform to get money out of politics would be necessary, such as overturning *Citizens United v. Federal Election Commission*: a Supreme Court Case decision that allowed for the creation of Super-PACs and unlimited campaign spending in the United States. At the moment, the rich and the financial sector in the United States have unprecedented access to politicians from both Democrats and Republicans, which have helped shift policy in their favor. While the United States often stands out as the epitome of neoliberalism, other affluent nations face similar challenges and trends as the rich have benefitted from lobbying and ideological campaigns that promote neoliberalism. In order to reverse some of these trends, massive social and political campaigns will be necessary.

Finally, this dissertation also speaks to debates on rising income inequality. Often, policy-makers and scholars in economics, sociology, and political science have focused on the decline in the size and power of the middle class in affluent nations (see Leicht and Fitzgerald 2014 for a summary of these debates). While the middle class has no doubt suffered as a result of

neoliberalism and financialization, the results from Chapter 6 show that the poor are falling behind both very affluent and the middle class. In other words, the poor seem to be the biggest losers as there has been a growth in employment concentration in low-wage, low-skill service sector jobs that are increasingly under attack by cost-saving technologies, anti-union tactics by employers, and the threat of outsourcing in an effort to maximize profits, satisfy shareholders, and fatten the salaries of management and owners (Fligstein and Shin 2007; Wright and Rogers 2015). Indeed, the 2016 presidential election campaigns of the Democratic and Republican Parties in the United States have largely focused on the middle class and white working class while the working poor and unemployed, who are disproportionately people of color, are largely placed in the backseat of priorities. This dissertation serves as a reminder to policy-makers and scholars that the poor are some of the biggest losers in the economies of affluent nations affected by neoliberalism and financialization and that solutions to income inequality focusing primarily on the middle class while leave many behind.

7.4 Limitations and Future Research

While the findings of this dissertation do provide new insights into the ways that neoliberalism and financialization affect income inequality in affluent nations, there are several limitations to this research that point to avenues for future research. First, the selection of 18 affluent nations traditionally used in quantitative cross-national research allows the findings to be robust to affluent nations during the neoliberal era; however, any expansion to other nations would require empirical evidence to support its claims. A natural extension of this study would be to shift the sample to a second tier of the 19th to the 50th most affluent nations, including post-Communist nations, in order to examine the differences between the sample of 18 nations used in this dissertation. Neoliberalism is likely to be lower in post-Communist nations; however, it is

unclear whether neoliberal reform in these nations would increase income inequality as dramatically as they do in affluent nations. The degree of financialization in this second tier of nations is also likely to be lower, except in East Asian nations like Singapore, Taiwan, and China. It is quite possible that the results would be largely the same in these nations; however, it is also possible that they would be significantly different. Empirical evidence is necessary to answer these questions.

Neoliberalism and financialization have arguably been more devastating in lower income nations as they are more vulnerable to neoliberal austerity often caused by sovereign debt crises and the subsequent intervention from international financial organizations like the International Monetary Fund (IMF) and World Bank (Harvey 2010). While there are many empirical questions about neoliberalism, financialization, and income inequality in Latin America, Africa, and Asia, quantitative studies are limited by a lack of quality data. Not only is economic inequality for the entire neoliberal era difficult or impossible to acquire, different measures of financialization and neoliberalism would be required. For example, data on debt owed to the IMF or other international financial organizations, the occurrence of sovereign debt crises and hyperinflation, and the size and strength of public and private banks would likely be more appropriate for lower income nations. Additionally, welfare state capacity and spending is much lower in these nations, which limits redistribution. As additional data become available on lower income nations, there is much opportunity to examine the effects of neoliberalism and financialization in these nations and compare and contrast that to the processes that occur in affluent nations.

Quality data of different measures of economic inequality and financialization also offer opportunities for future research in affluent nations. The World Wealth and Income Database

(Alvaredo et al. 2016) is currently expanding its data availability of wealth inequality and income to wealth ratios over the next few years, which provide new ways to understand distributions of wealth that are traditionally understudied. The data expansion currently underway will include information about the entire wealth and income distribution instead of just the top of the distribution, as it currently does. Given the increased scholarly attention to wealth inequality and disparities in income relative to wealth after the release of Thomas Piketty's (2013) *Capital in the 21st Century*, these new data will allow researchers to empirically test Picketty's claims, as well as develop new theory on economic inequality in the contemporary SSA.

Additionally, there is increasing data availability on different aspects of financialization, which are primarily being developed by the International Monetary Fund and World Bank. Information on stock market capitalization, FIRE value added, and the size of the assets of the largest banks are available after the year 2000; however, there is little to no data before 2000. In other words, the period when financial deregulation was at its peak has data available; however, earlier periods when deregulation was not as widespread are less covered. These data can be used to better understand financialization in the contemporary era; however, I was not able to use these data in this dissertation given my focus on long-run processes and the entire neoliberal era starting in 1981.

Finally, this dissertation raises questions about the effects of neoliberalism and financialization on social processes beyond income inequality. For example, Chapter 6 raised questions about why the poor lose out more relative to the middle class as a result of neoliberalism and financialization. While the poor tend to rely more on social programs and public goods to boost their incomes than the middle class, many of the poor still work and make

incomes in the market. Given that the shareholder value conception of the firm has encouraged companies to use cost-saving technologies to eliminate low-skilled jobs and undercut wages (Fligstein and Shin 2007), there may be a higher return to education, such as college degrees, in more financialized nations. I encourage future research to explore this avenue of inquiry.

Overall, neoliberalism and financialization have largely contributed to income inequality in affluent nations during the neoliberal era by creating a more unequal distribution in market incomes and by reducing redistribution. The rich have been the big winners, while the middle class and poor have been left behind. This dissertation raises concerns about the trends in neoliberalism and financialization on the social welfare of citizens in affluent nations. Reducing economic inequality will likely be a difficult task, though. Indeed, many middle and working class citizens in the United States, United Kingdom, and other affluent nations are politically polarized on how to proceed. As we move forward in the 21st century, it will be interesting to see how nations respond. Will it be blaming immigrants and the government while issuing an attack on the welfare? Or will nations enact increased financial regulation and expand social welfare programs and public goods? We shall see as time passes.

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